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Judith Ben-Michael

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Dog owner in problematic dog-rearing situations: Techniques of disciplining behavior

*Dog owner in problematic  
dog-rearing situations:  
Techniques of disciplining behavior*

# **Dog owner in problematic dog-rearing situations: Techniques of disciplining behaviour**

een wetenschappelijke proeve op het gebied van de sociale wetenschappen

Proefschrift

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*The argument was very sound,  
And coming from master's mouth  
Would have been laude for its truth  
But since the author was a hound,  
Its merit went unrecognized.*

*Jean de la Fontaine (1621-1695)  
'The farmer, the Dog and the Fox'*





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<b>DANKWOORD</b>	
<b>CURRICULUM VITAE</b>	



## PREFACE

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The interaction between a dog owner and his/her dog in problematic situations comprises many aspects that affect the owner's reaction. How the owner responds may depend on various factors such as perceptions of situations and how these are associated to emotions and behaviors. Furthermore, the effect of owner characteristics such as background information and attitudes related to dog ownership will be studied.

The central aim of the present study is twofold: to clarify aspects of the nature of the interaction between the dog owner and his/her dog in problem situations. Because owners frequently consider dogs as children, we want to explore whether there are similarities between the interaction owner-dog and the interaction parent-child pertaining to disciplinary techniques. This study focuses in particular on the dog owner in various dog-rearing situations, in which he/she is confronted with problematic dog behavior. It describes the relationships between the owner and his dog in terms of perceptions and emotions and how they are related to the owner's behavioral reactions in situations perceived by the owner as problematic. Furthermore, this study examines how characteristics and attitudes of the dog owner affect the relationship in these problematic situations. Finally, this study deals with the question of whether the interaction between dog-owner and dog resembles the interaction between parent and child in terms of perceptions, emotions, and behavioral reactions in everyday perceived problematic situations.

The literature related to disciplinary reactions of dog owners in perceived problematic situations is limited. Since dogs are frequently anthropomorphized, and even considered to be family members, it seems appropriate to employ theories and findings from the field of parent-child research in the owner-dog research.

Accordingly, *Chapter one* examines the human-dog research. In particular, we will concentrate on literature describing the position of the dog in the life of the owner, the way the owner communicates with his dog, and on factors that affect the relationship, focusing on problematic behavior of dogs. Additionally, because many dogs are considered as a part of the family, or as children, we will further review research on child-rearing in problematic situations. This comparison provides additional insights into dog-rearing behavior and into the

position of the dog in the human family. For the purpose of the present study, we used as a framework, a large Dutch study of disciplinary strategies of parents in problem situations. Specifically, we will focus on the role of perceptions and emotions in relation to parental behaviors, as well as on the role of some parental attitudes on disciplinary reactions within the context of everyday child-rearing situations.

The present study describes in *Chapter two* the content of the perceived problem situations, and the structure underlying the perception of the problem situations. In *Chapter three* there is a description of the emotions and the disciplinary reactions of the dog owner in problem situations. Further, *Chapter four* addresses the question of relationships among these reactions. *Chapter five* explores the role of owner characteristics on the relationships among perceptions, emotions, and the behavioral reactions. In *Chapter six* a comparison will be made between the relationships parent-child and owner-dog. Finally, in *Chapter seven*, the results and practical applications will be discussed and suggestions for further research will be made.

## **Chapter 1.**

### **General Introduction: The owner in dog-rearing situations**

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## **1.1 Introduction**

Dog-rearing comprises a variety of action patterns belonging to different situations specific to ongoing dog activities such as fighting, mating and playing. In many situations the owners react to the dog's behavior, sometimes they do not. Seemingly, the reaction depends on their perception of the situation, on the context of the situation, and maybe on the ideal image that an owner has of his dog. Undesirable behavior is common in the domestic dog population. The occurrence of such problems can be a significant source of distress for the owners. There is much literature about the prevalence of behavior problems in dogs (e.g. Vacalopoulos and Andersen 1993; Jagoe and Serpell 1996; Lund et al. 1996; Wells and Hepper 2000; Horwitz 2001; Takeuchi et al. 2001). There is, as well, anecdotal or inconclusive literature about dog training. However, the antecedents to the owners' reactions to these problematic situations are less well documented.

Humans appear to have an emotional bond or attachment to their companion animals that is not unlike what they experience with their family and friends. Since people often perceive their dogs as children or as part of the family (e.g., Katcher 1989; Gosse and Barnes 1994; Askew 1996; Beck and Katcher 1996; Overall 1997) we propose to draw information from the literature on child rearing in problematic situations as the frame of reference for our study. This literature describes the antecedents which influence the parental perceptual, emotional, and behavioral reactions to misbehaviors (Siebenheller 1990; Gerris et al. 1993; Korzilius 1996; Korzilius et al., 2001).

In the present study, we intend to explore the antecedents to the owner's behavior in problematic situations with the dog. For matters of comparison with the parent-child in problematic daily situations we will mainly focus on disciplinary reactions in problematic daily situations and attitudes of the dog owners.

First, we will describe the variables that are related to the reactions of the owner in problematic situations. Second, we will outline a model that describes the relationships between these variables. Third, in all these questions, we will refer to sex specific differentiation and to studies of parental reactions in problematic situations with children.

## **1.2 The position of the dog in the human world**

The relationship humans have with dogs shares many features of human-human interrelationships (e.g. Podberscek and Blackshaw 1994; O'Farrell 1994; Askew 1996; Beck and

Katcher 1996; Overall 1997, Serpell 2002). The human-dog bond has been described as the mutually beneficial and dynamic relationship between the owner and the dog that is influenced by behaviors essential to the health and well-being of both. This includes for example emotional, attitudes, psychological and physical interactions of humans, dogs and the environment (Bergler 1988; Olson 2002 Serpell 2002). This, in turn, may influence the animal's own behavior (O'Farrell 1994, 1995; Askew 1996). To some extent animal behavior is a partial reflection of the human behavior and owners frequently regard the animal's behavior within a particular psychological context that is similar to human behavior in context (Eddy et al. 1993; Askew 1996; Rajecki et al. 1998; Tenner 1998). Furthermore, the death of a dog can cause a grieving process which bears similarities to the grief humans experience following the loss of someone close (Siegel 1993; O'Farrell, 1994; Podberscek and Blackshaw 1994; Planchon et al. 2002). Collis and McNichols (1998), however, made some reservations about the concept of grief regarding the loss of a pet. Those feelings are according to them seldom as long-lasting, as intense or as disruptive as those experienced following the loss of a close human relationship.

An animal is seen sometimes as the fulfillment of certain desires, particularly in situations where other people are unable to satisfy such needs (O'Farrell 1994; Askew 1996). Dog ownership can provide benefits of security and social support (Bergler 1988; Siegel 1993; Serpell 1996a; Collis and McNichols 1998; Lane et al. 1998), can meet needs for companionship and attachment (Siegel 1993; Askew 1996; Allen 1997) or enhance overall physical and emotional health by their mere presence, ability to accept affection and acceptance of human shortcoming (Siegel 1990; Allen and Blascovich 1996; Beck and Katcher 1996; Garrity and Stallones 1998; Friedman et al. 2000; Olson 2002). Most pet owners show high levels of attachment behavior and feelings (O'Farrell 1994; Raupp 1999), feel responsible for the pet (Poresky et al. 1987; O'Farrell 1994; Beck and Katcher 1996), and become emotionally involved with or committed to the pet (O'Farrell 1994; Staat et al. 1996).

The behavior of a dog is not simply 'described', but characterized, with reference to specific psychological aspects and attributes, in the same way as human behavior may be characterized - the dog becomes anthropomorphized. This means that the perceived similarity between humans and dogs, the extent to which people have developed an affectional bond with members of other species (e.g., dogs) and the indiscriminate attributions about the emotional states in dogs might influence the use of anthropomorphism (Bergler 1988; Sanders 1990; Beck and Katcher 1996; Mitchell et.al. 1997; Serpell 2002). People regard companion animals, especially dogs, as loyal and trustworthy partners. Most dog owners believe that their

## **General Introduction: The dog owner in dog-rearing situations**

animals genuinely 'love' them, 'miss' them when they are away, feel 'joy' when they return, and are 'jealous' when they show affection to a third party (Serpell 1996a, 2002; Gallup et al. 1997). Humans often need to believe that dogs possess certain attributes seen as socially desirable in humans, but whose presence in the human character is apparently not something taken for granted. Moreover, there is a tendency of many dog owners to attribute human thoughts and characteristics to their pets. Some examples are the attribution to animals of the ability to differentiate between right and wrong, or being able to understand the rationale behind punishment, and to understand the human attribution of assigning quality to objects. Although the differences between dogs and humans are acknowledged, there are studies arguing that humans not only seek reflections of their own personalities in their pets but also project positive and negative experiences with other human beings onto their pets (Beck and Katcher 1996). The belief of the owners that the dog is part of one's personal identity is reinforced by the social response to people with dogs. For example, being with a dog has often a positive effect on the image of the owner: the owner is perceived as more approachable, more attractive and trustworthier than people alone (Beck and Katcher 1996). Humans also tend to regard and interpret an animal's behavior within a particular psychological context similar to human context (Sanders 1990; Eddy et al. 1993; Askew 1996; Mitchell and Hamm 1997; Tenner 1998; Serpell 2002). For example, many dogs are treated for behavior problems with traditional 'analogous humanlike behavior therapy methods' (Askew 1996; Beck and Katcher 1996; Overall 1997). Askew (1996) also argues that our pets display evolutionary modifications of ancestral behaviors that function to elicit human parental care. According to him the behavior of the pet owner not only resembles the parental behavior, but it actually is parental behavior directed towards members of other species.

The relationship between dogs and people is rooted in the evolution of both. Dogs retain much of the behaviors of young pack-oriented animals and consider humans as members of their pack. From the human's point of view, the dog is a member of the family and from the dog's perspective the family is his pack (Beck and Katcher 1996). Many dog owners view their dog as a partner and as a full member of the family (e.g. Cain 1985; Hart and Hart 1985; Soares 1985; Sussman 1985; Albert and Bulcroft 1987, 1988; O'Farrell 1992, 1994; Askew 1996; Back and Katcher 1996; Lane et al. 1998). In many cases, the dog functions as surrogate for children or takes a prominent place in the human network of the owner (Johnson et al. 1990). People often compare owning a dog to having a child. There are similarities of course: both require constant nurturing, protection, attention for round-the-clock physical and emotional needs,

and both are completely dependent on their caregiver. Pets are treated like children because they provide constant and continual access to the kind of uncomplicated affection that parents exchange with children (Askew 1996; Back and Katcher 1996). However, in contrast with children, dog owners lack a repertoire of instinctive responses designed to mesh with that of the dogs (O'Farrell 1994; Askew 1996).

### **1.3 The image of the dog**

Dog owners regard their dogs as being 'minded' and responsive, not because they believe that the dog is literally human, but, because they believe that the dog is more than an object (Fogle 1990; O'Farrell 1989,1994; Sanders 1993; Beck and Katcher 1996; Serpell 2002). Dog owners regard their dogs frequently as individuals who are empathetic, capable of reciprocation, and aware of the role one has in the relationship (Cain 1985; Sanders 1993, O'Farrell 1994; Beck and Katcher 1996). The dogs are regarded as having at least a rudimentary ability to understand the role of the 'other' (i.e.the owner), while, reciprocally, the owner is regarded as understanding the role of the dog in order to establish the ongoing relationship. Owners view their dogs as having an emotional life and as having the ability to be emotionally responsive to their owners. Many of the dog owners agree that the dogs have the ability to 'think'. Most of them, however, also agree that the 'thinking process' of the dog is predominately concerned with immediate events and their immediate physical and emotional experiences. On the other hand, O'Farrell (1989), Sanders (1993), Rasmussen and Rajcecki (1995), Bahling-Piering (1999), and Vidović et al. (1999), studied owners who believe that their dogs are able to reason because the dogs were able to modify their behavior in the course of training or playing. They reported that owners perceived dogs not only as being able to reason, but also believed the dogs' reasoning to be linked to emotions. Furthermore, owners believed that dogs can experience loneliness, joy, embarrassment, anger, guilt and shame and vindictiveness. Owners believed that dogs possess some basic 'sense' of the rules imposed by humans. They could describe incidents in which the dogs violated the rules and subsequently behaved in ways that indicated guilt (body postures such as bowed head, tucked tail) (O'Farrell 1989, 1994; Beck and Katcher 1996). Owners frequently understood the relationship with the dog as revolving around emotional issues. But the owners, on the other hand, also saw the relationship as unique because criticism and contingent feelings which typify human relationships are missing. Because of these 'humanlike' attributes, dogs are included in many households as authentic family members

## **General Introduction: The dog owner in dog-rearing situations**

who participate in household activities such as meals, birthdays and other social activities (Beck and Katcher 1996).

### **1.3.1 Development and prevalence of behavior problems in dogs**

The behavior of dogs is a very complex process. It is an integration of the outgoing processes in underlying organic systems, in interaction with the external social and physical environment (Askew 1996; Overall 1997, 2001; Dodman 1999). A great degree of variation appears to exist in what are considered normal and abnormal behaviors as compared between different breeds and even between individual animals of the same breed (Serpell 1995; Hart 1995; Burghardt 2003). For example, the employment of dogs in working or performance settings involves in almost every aspect a different kind of management style than that required for a house pet or show dog. Behavior problems of the dog are an important determinant of the success of the human-dog bond. They can interfere with the development of a satisfactory relationship between the owner and the dog. They may even lead to the failure of the development of the human-dog relationship or its disruption. The quality of the owner's relationship with the dog depends, to a large degree, on the dog's behavior. If the dog's behavior is such that it meets the owner's expectations and if there are minimal behavioral conflicts than the relationship can be rewarding. Often, however, we find that a companion animal falls short of the caretaker's expectations, or there are serious unresolved behavior problems that prevent the establishment of a close attachment or erode an existing attachment, leading to dissatisfaction with the pet, and perhaps, being given up for re-homing or euthanasized (e.g. McBride 1995; Hart and Hart 1997; Overall 1997; Hubrecht and Turner 1998; Wells and Hepper 2000; Takeuchi et al. 2001).

There are various considerations regarding the prevalence of behavior problems in dogs. Although the ontogeny of many behavior problems in dogs is still unknown, many studies clarify the origin of the problematic behaviors in terms of training, environment, and genetic predisposition.

For example, King et al. (2003) suggested that a novel or a startling environment can trigger fear-induced aggression and Luescher (2003) suggested that compulsive behaviors (such as chasing, locomotory behaviors, chewing subjects, self-licking, self-directed aggression, unpredictable aggression, barking or howling) are caused by genetic predisposition and environmentally induced conflict, frustration or stress. Further, it has been proposed that particular types of dog-owner interaction, such as allowing the dog to sleep in the bedroom or



in the bed, or feeding it before the owner's meal time may help to potentiate dominance related behavior (O'Farrell 1987; Voith et al. 1992; Fisher 1993; Rogerson 1993). Jagoe and Serpell (1996) found that obedience training, timing of the meal, sleeping arrangements, as well as prior experience with dogs are related to the prevalence of certain behavior problems. O'Farrell (1987) found a statistical relationship between the occurrence of dominance and the owner's degree of emotional attachment. Peachy (1993) considered lack of knowledge about dogs as contributory to behavioral problems, while Borchelt and Voith (1986) who found no such association. Formal obedience training and canine behavior counseling were considered by some studies as significant in reducing the occurrence of behavioral problems, but this did not rely on clinical cases (Campbell 1986a; Clark and Boyer 1993).

This is at odds with the findings of Voith et al. (1992), and Voith (1993) who found that statistical evidence failed to support the notion that spoiling the dog or interacting with the dog in anthropomorphic ways may contribute to the occurrence of behavioral problems. Further, Voith et al. (1992), Voith (1993) and Takeuchi et al. (2001) suggested that dogs that are not obedience trained are no more likely to engage in problem behaviors. Askew (1996), likewise, also found that owners of dogs who were more likely to engage in behaviors considered a problem and owners of non-problem dogs, employ similar anthropomorphic attitudes and spoiling treatment practices.

Although the dog exhibits a wide variety of behaviors common and natural in the dog population (Mugford 1995; Landsberg et al. 1997; Askew 1996; Overall 1997, 2001a), there is a major difficulty in the classification of behavior problems in dogs because of the notion that a dog's behavioral problem is a relative one, i.e., the problems can only be characterized and understood relative to the human environmental context in which they occur (Hart 1995; Askew 1996; Mills, 1997; Overall 1997). Let us examine, for example, territorial aggression in dogs: When a young puppy barks at strangers, those owners who want a good watchdog reward him for this. The problem here is not aggression towards the strangers. Aggression directed towards a threatening stranger is desired behavior and, therefore, not a problem. Not defending the home aggressively against an intruder can in this context, become a problem.

Of all the types of dog behavioral problems, the most frequent and most subjected to empirical research are various forms of aggression, fears and phobias, elimination related problems, and separation related problems (e.g., Wright and Nesselrote 1987; Chapman and Voith 1990; Landsberg 1991; Serpell and Jagoe 1995; Landsberg et al. 1997; Wells and Hepper 2000; Takeuchi et al. 2000, 2001). Campbell (1986 a,b) found in a survey of 1400 dog

## **General Introduction: The dog owner in dog-rearing situations**

owners that the most cited problems were jumping on people, barking, begging, jumping on furniture, digging, chewing, fear of noise, over-protectiveness (owner and/or territory) and repeated escape. Landsberg (1991) suggested a distribution of the main behavior problems detected in (pure-bred) dogs: aggression (about 60%) - most commonly dominance aggression, territorial aggression, fear aggression and intraspecies aggression, inappropriate elimination (about 18%), and destructive behavior (about 15%). For example, for the most aggression related problems, more incidents are consistently reported in male dogs (of all cases of aggression 68% involved males) compared to bitches (Lockwood 1995; Mugford 1995; Hunthausen 1997; Overall 1999; Beata 2001). Also Mugford (1981), Houpt (1983), Voith (1993), Beaver (1994), Hart and Hart (1997), Beata (2001) showed that more than 50% of behavioral complaints were connected to different aspects of aggressiveness (aggression towards owners, aggression towards strangers and aggression towards other dogs, biting problems). Elimination problems include inappropriate urination/defecation, marking with urine, submissive urination, excitement related urination, separation anxiety, and, fear related urination (Voith and Borchelt 1985; Reisner 1991; O'Farrell 1992; Voith 1993; Askew 1996). Separation anxiety as a cause of destructive behavior was also reported as a frequent behavior problem (e.g., Wright and Nesselrote 1987; Landsberg 1991; Voith 1993; Askew 1996; Lund et al. 1996; Sherman et al. 1996; Takeuchi et al 2000, 2001; Overall 2001 a,b; Appleby and Pluijmakers 2003). Prolonged periods without separation from the owner, a prolonged period without the person to whom the dog is attached, periods spent at a shelter, have been cited as causes to separation anxiety (Voith and Borchelt 1985; Serpell and Jagoe 1995; Appleby and Pluijmakers 2003). Separation related behaviors include destruction of household items in home, inappropriate elimination, hyperactivity, escape attempts, fear responses, excessive barking, and whining (McCrave 1991; Hart 1995; Askew 1996; Overall 1997).

Other problematic behaviors are behaviors ranging from excessive avoidance to overtly assertive investigation of, and contact with, objects (Wright and Nesselrote 1987; Landsberg 1991, 1997; Askew 1996; Overall 1997). The most common eliciting stimuli are approaching people (both familiar and unfamiliar), thunder, doorbells and phobic reactions to specific stimuli. Approach components include behaviors such as barking or running into the direction of a stimulus (moving object), unexpected noise (doorbell). Further, excessive avoidance components include barking, shaking or withdrawing from the target stimulus, moving to a safe location (behind owner, or a safe corner in the room). Additional problems are mounting behaviors (such as objectionable mounting behavior directed towards human legs, arms or inanimate objects (mostly performed by male problem dogs) and coprophagy (eating of feces

mostly performed by female problem dogs) (Hart 1985; Houpt 1991; O'Farrell 1992; Askew 1996, Hart and Eckstein, 1997). Many of these problems are, in fact, species-typical behaviors and are not always related to obedience. Their onset can be induced by behavior in specific situations and daily management of the dogs (Landsberg 1991; Voith et al. 1992; Clark and Boyer 1993; Voith 1993; Serpell and Jagoe 1995; Lund et al. 1996; Takeuchi et al. 2001).

Dehasse (1999) defines two types of behavioral disorders: nuisances and pathologies. The first type of behavioral disorders comprises *nuisances* that are normal behaviors problems induced by the environmental context of the dog, frequently with the owner. For example, owners complain most often about behavior problems such as barking, or even biting people. These behaviors are dog normal and natural; however, the owners consider them as 'undesirable', and inappropriate (O'Farrell 1991; McBride 1995; Turner 1997). They may also be abnormal because they develop as a consequence of innate non-domesticated behaviors (Overall 1997; Takeuchi et al. 2001). These animals are not 'crazy'. Their normal animal behavior does, however, conflict with human needs. It has been estimated that up to 90% of dogs exhibit a wide variety of behaviors which the owners find inappropriate or unacceptable (O'Farrell 1992; Wells and Hepper 2000), or that 'the problem' is not the behavior of the dog, but rather the problem this behavior poses for its owner (Askew 1996; Ledger and Baxter 1997). This ranges from relatively minor problems, such as tail chasing, to more serious problems such as destructiveness and aggression (Knol 1987; O'Farrell 1992; Hart 1995; Mugford 1995; Ledger and Baxter 1997; Wells and Hepper 2000).

The second type of behavioral disorders comprises *pathologies* that are defined as the incapacity of the dog to adapt to the environment with production of altered context patterns. This causes interference with normal behaviors and social interactions. Askew (1996) proposed a detailed classification of behavioral problems of the dog: it includes *system parameters* (preprogramming, physiological, and system interactional effects) that affect the animal's behavioral system such as patho-physiological disorders, neurological and cardiovascular diseases, genetic and hormonal factors and/or *environmental etiological influences* (learning-mediated effects) such as experience related problems (lack of socialization, past exposure to intense aversive environmental stimuli, present environmental deficiencies). Additional elements are lack of behavioral training, unintentional owner-fostered behavior problems (begging for food), and unwitting encouragement of behavior problems out of ignorance (encouraging a dog to bark at or chase a person).

## **General Introduction: The dog owner in dog-rearing situations**

O'Farrell (1991), Turner (1995) and Horwitz, (2001) suggested that apart from organic maladies and disturbances which may be potential reasons for behavior problems in companion animals, there are many non-organic causes of behavior problems. Turner (1995) listed three categories: disregard (or lack of knowledge) of the biological and socio-psychological needs of the dog, false expectations projected onto the dog, and incorrect interactive behavior with the pet. Turner (1996) emphasized the role that learning may play in maintaining an undesirable behavior in the animal, as well as the fact that companion animals may condition the owner's response to their behavior. O'Farrell (1991) even separated the 'interpretation' of the problem behavior (e.g. which aspects are instinctive and which are learned; does fear or overexcitement play a role), and the potential 'causes' (e.g. involvement of aspects such as early environmental, genetic, morphological aspects, and the attitude of the owner). The chances that a problematic behavior prevails, depends on various factors such as breed, age, sex, castration status, the propensity to develop particular behavior problems, and the relationship with the owners (e.g. Knol 1987; Wright and Nesselroete 1987; Jagoe 1994; Bradshaw and Nott 1995; Hart 1995; McBride 1995; Serpell and Jagoe 1995; Jagoe and Serpell 1996; Takeuchi et al. 2001). Slabbert and Rasa (1993) and Serpell and Jagoe (1995) emphasized the long-term effects the history of the pup can have on its behavior. In addition to genetic factors influencing the expression of context and behavioral problems, other factors can be critical: early upbringing (eg. originating from a breeder or a so called 'puppy farm'), suffering from a trauma (eg. onset of sound phobia after a single exposure to a loud noise), suffering from stress due to transport at early age, poor socialization, or rehoming in the hypersensitive period of eight weeks, can have traumatic effects on the pup and may cause behavior problems later in life (Hart, 1995; Mugford 1995; Serpell and Jagoe 1995; Ledger and Baxter 1997).

Some behavior problems seem to relate solely to the perceptions of the owner. Others are genuine disorders of behaviors caused by genetic predispositions and/or early experiences (Askew 1996; Ledger and Baxter 1997). The perceptions of the owner define a case as a behavior problem. Although 'common' behaviors such as barking, marking, separation anxiety, or fearfulness, are, in fact, perfectly natural behavior patterns of the dog, dog owners may regard them as a source of distress and annoyance, i.e. 'undesirable or inappropriate behavior' (Landsberg 1991; Landsberg et al. 1997; Mills 1997; Overall 1997; Dehasse 1999; Takeuchi et al. 2000, 2001). Other disorders of behavior may have been learned. They also may reflect an ongoing pathology or a certain physiological state or tendency (Askew 1996; Mills 1997; Dehasse 2000; Overall 2001a).

Overall (2001a), suggests that while behavior management may play a role in both the expression of behavioral problems and their resolutions, it would be irresponsible to advance poor management as the primary etiology of behavioral disorders. The vast majority of animals with behavioral problems are not poorly managed or misbehaved; they are abnormal or are responding to an abnormal social system (Overall 2001b). She emphasizes the importance of the 'organic' nature of problem behavior of animals (disorders of neurochemical metabolism) that underlie many, if not most, behavior problems.

For example, many anxiety-related conditions, including impulsive aggression have been viewed as neurological conditions. However, although being closely related they are not identical at the neurophysiological level and consequently should not be treated as such.

It is necessary to understand the gross neurochemical pathways involved in these conditions, their locations and interactions, and how they are affected by medications used to treat them.

### **1.3.2 Dog ownership and communication**

Effective communication is essential for the formation and maintenance of social relationships. Stability in canid social structures is dependent on effective communication, and, equally important, whether the dog lives in a conspecific group or with humans (Fogle 1990; O'Farrell 1994; Bradshaw and Nott 1995; McBride 1995).

The diversity of breeds suggests that there may be several types of communication and social systems varying in complexity, both quantitatively and qualitatively (Fogle 1990; Bradshaw and Nott 1995; McBride 1995; Serpell 1995). The extent to which dog characteristics are exhibited varies not only between breeds, but also from one situation to another. Dogs communicate by using their pheromones and species-specific behaviors in an integral fashion. The fact that dogs appear to recognize other dogs and even humans as conspecifics, suggest that species identity may be more encoded in smells than in appearance (Fogle 1990; O'Farrell 1994; Bradshaw and Nott 1995; Serpell 1995). Non-verbal communication through scent is mediated by pheromones which divulge not only the identity of other pack members (dogs and humans), but also territory, sexual state, social status, emotional and physical states, age and genetic relatedness (e.g., Fogle, 1990; Bradshaw and Nott 1995, Overall, 1997). This is the most powerful form of communication for the dog. Voices (barking, howling, and yelping), on the other hand, are a weak form of communication. These, nonetheless, have important functions. As with scent, the voice can communicate individual, physiological, and sexual information. Further, dogs use vision to communicate body and facial expressions that

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indicate the dog's emotional state. Miklósi et al. (2003) and Pogrász et al. (2003) maintain that looking behavior has an important function in initiating and maintaining the communicative human interaction. Therefore, the readiness of dogs to look at the human face can lead to the unique forms of human-dog communication. For example, dogs watch human eyes, because eye contact is an important mean of communicating authority. However, vision is not always a powerful and reliable means of communication. Some breeds are poor body signalers. Because of human intervention, genetically (selective breeding) or surgically, it is possible that the signaling structures are changed, and that dogs are then unable to communicate the most uncomplicated messages.

Dogs are pack animals and instinctively want to form relationships with each other. Raised with humans, they will regard humans as dogs, and, therefore, will relate to them as they would relate to other dogs in a pack. This means that they may expect the human partner to react in a 'dog-like' way. For example, Rooney et al. (1999, 2001) showed that during human-dog play, humans communicate 'dog-like' playful behavior to the dog via play signals. When humans do not send the correct signals, or, when the signals are misinterpreted, the outcome of the interaction may have serious consequences. On the other hand, humans may think that being part of the (human) group means that the dog is able to understand what is expected and required from him in order to fit into patterns of human living. The dog also must comply with these requirements.

Effective communication with the dog means that the owner is aware of the dog's limitations in his understanding, that the owner understands the behavior and motivation of his dog, and understands the dog's specific traits and learning history. An owner should be familiar with the body language and vocalization of his dog. He must be aware of the signals he sends to the dog and how the dog may translate these signals in terms of the situation as a whole and in terms of interaction (Cambell 1995; McBride 1995; Askew 1996). Dogs are probably unable to think symbolically, for example, they cannot understand language. Even when owners think that the dog 'understands' what they say, this 'understanding' is merely a response to body language and to sounds articulated by the owner (Fogle 1990; O'Farrell 1989, 1992; McBride 1995). Dogs learn to associate individual words with certain expectations, but they do not understand words and are incapable of understanding concepts implied by rules. Hence, dogs will not understand a lecture on obedience. They may, however, associate the anger of their owner with their actions. Due to steadfastness and consistency in owner communication, the dog soon learns to "read" human body language and other non-verbal communication signs. The human ability to understand the language of the dog can determine

how well the dog is accepted into the family. The owner who is lacking the knowledge of canine social behavior and communication, may perceive the dog's behavior as inappropriate. Mistranslation of the signs that a dog is sending is quite common and can lead to serious problems and bad feelings as the misreading the dog's signs and emotional status can be distressing for its human family, and can even be fatal for the dog (O'Farrell 1989; Fogel 1990; Cambell 1995; McBride 1995; Core 2000;).

### **1.3.3 Dog ownership and owner attitudes and characteristics**

In order to understand the human-dog relationship and in order to design appropriate treatment programs it is important to establish how, if at all, dog owners' attitudes, personalities, sex, actions and experiences can affect the likelihood of their dogs developing behavior problems.

There are several reasons why dogs (and cats) became such a valuable partner to humans. As Serpell (1996a) put it: 'Dogs and cats happened to be in the right place at the right time when our ancestors were taming and domesticating various wild mammals. They have also been a part of the human society for thousands of years and had therefore plenty of time to adapt to the role of companions'. Dogs remain in the particular areas of their owners, are relatively clean, develop specific attachments to particulars in the group, have the inclination to defer to individuals whom they perceive as dominant, are eager to please, and willing to cooperate (Serpell 1996a; Overall 1997). Humans and dogs share many aspects of their social systems such as living in family groups, providing extensive parental care, giving birth to young that require large amounts of early care and, later, large amounts of social support. They also both have extensive vocal and non-vocal communication. Day to day interactions are based on deferential behavior which is context dependent and aimed at avoiding open conflicts (Askew 1996; Serpell 1996a; Overall 1997). Dogs manifest their bonds to their owners, sometimes despite deficiencies and failures of the owner, by seeking the owner's vicinity, by soliciting caresses, by exuberant greetings, by fear of separation, and by deferential behavior (Fogle 1990; Back and Katcher 1996; Serpell 1996a). On the other hand, people need to be respected, admired, and needed by others. A fulfilling and satisfying relationship with other human beings is probably more rewarding for a human than a relationship with a dog. However, by being reliable and unconditionally affectionate and accepting, dogs can function as surrogates to humans (Hart 1995; Back and Katcher 1996; Serpell 1996a) and possibly provide the owner the satisfaction that a human relationship cannot provide.

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The owner has the responsibility to nurture and protect the dog, to provide leadership, and to teach and train it (Serpell 1986; Voith et al. 1992; Hart 1995; Askew 1996; Back and Katcher 1996; Overall, 1997). Serpell (1989) described the 'opportunity for nurturance' as one of the most fulfilling and important aspects in the human relationships. 'Taking responsibility for the care and well-being of a child, for example, can help people to develop a sense of being needed; it can provide meaning to their lives, and help them to sustain commitment to personal goals. By virtue of their resemblance to children, pets can undoubtedly provide their owners with comparable psychological rewards'. Many behavior patterns in dogs, like those of children, seem especially designed to elicit care in the human owner (Askew 1996). Like a child, the dog must be continually cared for, fed, watered, bathed, groomed, and protected (Back and Katcher 1996).

Many studies of human-dog interactions have explored issues related to the attachment of people to their pets (e.g. Lago et al. 1988; Johnson et al. 1992; Serpell 1996; Zasloff 1996; Rasmussen and Rajecki 1998; Vidović et al. 1999; Marston and Bennett 2003). Dogs are seemingly the most adept at playing affectionate and emotionally supportive roles providing the emotional basis for forming alliances between people and dogs (Albert and Bucroft 1988; Mugford 1995) and to function as significant attachment figures to reduce loneliness, provide the comfort of proximity figures (e.g. Melson 1988; Siegel 1990; Weiss 1991; Tuber et al. 1996; Vittersø et al. 1998), and contribute to the creation of affectional bonds (Wells and Hepper 1997; Vittersø et al. 1998). Attachment between people and dogs may occur because people are inherently predisposed to becoming attached to other people, and dogs are predisposed to form attachments with humans (Voith 1985; Millot 1994). Dogs fit frequently into the attachment mechanisms that operate between people because people are generally predisposed to be 'attached' to other people, and dogs exhibit many characteristics that cause human to attach to dogs. Therefore, it is easy to see why people become attached to pets, and, in many respects, why they relate to them as their own child. 'People know that a dog is a dog, but feel about it as a person' (Voith 1985). Many attachment mechanisms and the behavior patterns between humans (Bowlby 1973; 1979; Ainsworth et al. 1978) are similar to attachment processes between humans and dogs (e.g., Voith 1985; Johnson et al. 1992; Askew 1996; Zasloff, 1996; Overall 1997; Budge et al. 1998; Topal et al. 1998, Prato-Previde et al. 2003). Attachment to the dog may suggest the extent of the emotional owner-dog bonding (such as love, trust, loyalty shared happiness and feelings associated with camaraderie), but may also refer to behaviors that pertain to human-dog interactions such as proximity, or time spent together in various activities, such as caring activities, walking the



dog, training, playing with the dog, and carrying photographs of the dog (e.g. Serpell 1989; Hart 1995; Patronek et al. 1996; Zasloff 1996; Budge et al. 1998; Vidović et al. 1999; Bell and Richard 2000). Budge et al. (1998) showed that people who are strongly attached to their pets spend much time with them. They are also affected mentally and physically by this closeness. Moreover, Serpell (1996) reported that attached owners perceive fewer differences between their pets' ideal and actual behaviors around nervousness, excitability, lack of obedience, hyperactivity and separation-related behaviors, indicating greater satisfaction with the behaviors exhibited.

Further, research has shown that individuals who have responsibility for the care of a companion animal scored high in attachment to the pet (Stallones et al. 1990). However, Johnson et al. (1992) suggested that there is no relationship between pet care and attachment. He maintained that women are more attached than men to their favorite pet, and that people with fewer social ties have a greater attachment to their pet. They also concluded that the degree of attachment is a complement to, or a people substitute for, social relationships. Additionally, Serpell (1996) reported that owners who become strongly attached to a pet had previously satisfying attachment to a pet and they are also more likely to be female and childless.

Van Tilburg (1988) and Reis and Shaver (1988) suggested that the need to affiliate with other human beings is reciprocal, and, when needed, it can contribute to the establishment of a supportive network that, in turn, will decrease the chance for loneliness. Although human-pet relationship may not be identical to person-person relationships, they do seem to have a great deal in common, particularly as a source of support. The dog, together with other significant persons, is frequently considered a part of supportive networks. Research has shown that dogs have a positive impact on well-being of their owners, and that they may enhance social interactions between people, combat loneliness and depression promote feelings of social interaction (Hart 1995; Budge et al. 1998; Lane et al. 1998; McNicholas and Collis 1998, 2000), and increase feelings of being safe from harm (Hart 1995). With disabled people, dogs increased the sense of social integration and enhanced the self-perceived health and supportive relationships with the dog (Hart 1995; Lane et al. 1998). Dog companionship can also enhance feelings of support, particularly when human social support is reduced (Siegel 1990, 1993; Sable 1991, 1995). Consequently, this can result in various positive effects in terms of reduction of loneliness. This contributes to the general sense of well being and

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satisfaction (Cusak 1988; McNicholas and Collis 1995; Lane et al. 1998; McNicholas and Collis 1998, 2000).

Although there are many benefits associated with dog ownership many dogs pose a burden to their owners and many of dogs are re-homed, relinquished to animal shelters or there is even a question for euthanasia (DiGiacomo 1998; Marston and Bennet, 2003). Miller et al. (1996) and Patroneek et al. (1996) suggested that the burden of ownership intensifies when owners have inappropriate care expectations, when the amount of effort required in caring for the dog is exceeding their expectations of the time as well as the expenses, when the effort required by the dog and when the benefits of ownership are outweighed by the liabilities of problems of the ownership.

### **1.3.4 Male and female owners and dog ownership**

In the course of their development, men and women accumulate information that shapes their perception of their roles as parents, their attitudes, and their belief systems (Hertzog 1991, Mangelsdorf et al.1998). In addition, there is evidence that, with children, mothers and fathers differ in their interactive style (Simons et al. 1990; Gerris et al. 1990; Harris and Morgan 1991; McIntyre and Dusek 1995) and in disciplining styles (Grusec and Goodnow 1994; Fagan and Barnett 2003) .

Studies on relations within the family (parent-child relationship), reveal that there is no family activity which is as deeply enmeshed with traditional values and norms as childcare. The principal work of childcare falls to the mother, particularly when the children are young (Horna and Lupri 1984; Cacia 1986; Stevenson-Hinde 1991; Ross and Willingen 1996; Sanchez and Thomson 1997). However, research also indicates that married women and men are reshaping employment and housework to share a more equal division of labor. Men are performing more housework and family work because of a heightened social and personal commitment to fathering (Atkinson and Blackwelder 1993; Sanchez and Thomson 1997) and because of child-centered fatherhood that may be a result of compassion, sympathy and support for the mother arising out of the experience of fathering and child rearing (Snarey 1993). However, parenthood reshapes more the mother's routine than the father's routine because it seems that the division of labor and care in the contemporary marriage is more gender-traditional than egalitarian (Sanchez and Thomson 1997). Moreover, maternal gatekeeping behavior reduces the involvement of fathers that are considered by mothers as incompetent fathers (Fagan and Barnett 2003).

The existing literature regarding sex differences in relationship to companion animals provides contradictory evidence about the differences between men and women and their relationship with their dog. On the whole, the sex differences related to pet ownership are few (Beck and Katcher 1996; Knight et al. 2004). Hecht et al. (2001) showed that men can benefit more from pet ownership than women in the areas of network creation and benefits of well-being, Triebenbacher (1998) suggested that girls are more attached to animals than boys and Knight et al. (2004) suggested that gender differences might be relating to belief in animal mind and attitudes toward animals concerning the use of animals, i.e. female respondents were less supportive of animal use than male respondents.

Furthermore, Wells and Hepper (1999) suggested that both canine and human sex influence certain elements of a dog's response towards the presence of a human. For example, the sex can exert an effect on the dog's barking and eye orientation: dogs may show more behaviors suggestive of defensive-aggressive reactions, e.g. barking and maintaining eye contact towards men than women.

### **1.3.5 Disciplinary techniques**

The existence of many types of causal connections between the characteristics of the behavior problems and the situational context implies that there are many approaches which may modify these problems (Korzilius 1996). The situations in which an owner finds it necessary to discipline his/her dog, are those in which the dog displays impulsive behavior, transgresses house-rules or normative rules (especially in public), or displays behavior which is perceived by the owner as problematic, such as separation anxiety (Sanders 1990; Askew 1996; Jegoe and Serpell 1996; Overall 1997). A considerable amount of work is needed to determine the causes of a behavior problem or the factors that maintain its expression (O'Farrell 1991). The simplified approach in dealing with pet-rearing and disciplining which animal behaviorists employ and advise includes two possibilities: punishing the undesirable behavior or rewarding the good behavior. This approach involves:

- a. Behavioral/environmental: changing the environment to eliminate specific stimuli which elicit behavioral problems; conditioning and counter-conditioning the dog's behavior; changing the attitude and the behavior of the owner towards the pet (Hart and Hart 1985; O'Farrell 1992; Askew 1996; Serpell 1996; Overall 1997; Voith and Borchelt 1998).
- b. Medical: surgery, i.e. spaying and neutering and drug administration, e.g. tranquilizers or hormonal and pharmaceutical manipulations (O'Farrell 1991).

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Translations of these techniques into human disciplinary techniques can be expressed in terms of intensity of control, such as power assertion, punitiveness, physical and verbal punishment, and quality of the owner's disciplinary methods, such as love or attention withdrawal, and ignoring transgression.

However, many owners might consider dogs almost human due to their seemingly human attributes such as fear, hunger, and desire to protect and to be protected. Subsequently, dog owners may issue conditional clauses to their dog, e.g.: 'If you jump on the bed, I will be very angry'. Because of the common belief that animals do not understand reasoning, these inductive techniques are not considered by animal behaviorists as a disciplinary technique for dogs. Nevertheless, it is possible that if the dog is highly anthropomorphized by the owner, 'common' disciplinary techniques may include the expectation that the pet understands the punishment or the inductive elements of the owner's reaction like the tone used by the owner and/or his/her body language (O'Farrell 1989; Fugal 1990; Vomit et al. 1992; Rasmussen and Ramekin 1995).

### **1.4 Research on parent-child interaction**

The present study investigates the antecedents of behavior of dog owners. Assuming that these antecedents bear a resemblance to the antecedents of behavior in the interaction between parents and children, we will discuss relevant issues of these interactions between parents and children. The theoretical considerations of this study are primarily modeled on the studies of Siebenheller (1990) and Korzilius (1996). In their studies, they attempted to describe the disciplinary reaction of the parents in problematic child-rearing situations. Specifically, a distinction will be made between the situational characteristics and the personality characteristics of the parents.

#### **1.4.1 Parental reactions in problematic child-rearing situations**

The term parenting covers a vast number of issues. Parenting may be split into at least two parts, namely parenting (or maternal or paternal) practices and parenting (or maternal or paternal) style. Hart et al. (1998) defined "practices" as a subset of parenting behavior aimed at specific outcomes - "strategies undertaken by parents to achieve specific academic, athletic, or social competence goals in specific contexts and situations". Practices tend to be assessed in terms of the content (e.g., spank, hug, scolding, praising) and the frequency of behavior rather than its quality. The quality of interactions is an essential aspect of parenting 'style'

(e.g., with warmth, or restricting) described by Hart et al. (1998) and Stevenson-Hinde (1998) as constellations of parent-child interactions over a wide range of situations.

A problematic disciplinary situation was described by Peters (1985) and by Gerris et al. (1988) as an incident which takes place in a situational context that happens in the daily course of interactions between parent and child (daily pedagogical child-rearing practices). These situations are regarded by the parent, as well as by the child, as problematic and are concerned with the way these situations are perceived and interpreted (Gerris et al. 1988; Siebenheller 1990).

In the disciplinary encounter, the parent attempts to control and change the child's behavior (De Veer 1990; Maccoby 1992; Russel and Russel 1996). Discipline often refers to the practices parents use to discourage inappropriate behavior and gain compliance from the children. This construct encompasses a broad range of parental behaviors. Discipline includes effective (positive and proactive practices) and ineffective (maladaptive, dysfunctional) practices (Kendziora and O'Leary 1993; Russel and Russel 1996).

Parents can use a variety of methods (effective and ineffective) to communicate to the child that they disapprove of the child's behavior, such as clear rules and requests and direct reinforcement, brief withdrawal of privileges, time out from a reinforcing environment and application of reasoning and induction, unclear rules of requests, excessive attention for inappropriate behaviors, use of harsh physical punishment without sufficient reinforcement for appropriate behaviors and frequent reliance on coercion (Goodnow 1984, 1988; Miller 1988; De Veer 1990; Decović 1991; Kendziora and O'Leary 1993; Grusek and Goodnow 1994; Russel and Russel 1996; Brenner and Fox 1998).

The assumption is that parents are not acting solely on a stimulus provided by their child in the immediate situation. The choice of a method reflects the ideas that the parents hold, the importance of the underlying goal, and the knowledge of the past results of their disciplinary actions, the nature of the situation, the child's understanding or knowledge, the child's emotional state and cognition, child misdeeds, disposition, value systems and parental life experiences (Goodnow and Collins 1990; De Veer 1990; Grusec and Goodnow 1994; Grusec, 1997; Brenner and Fox 1998; Ateah 2003; Kochanska et al. 2003). This type of discipline intervention requires from the parents to be flexible in their disciplinary reactions. Parents learn to administer positive reinforcements such as attention, praise, or material rewards on compliance. Parents also learn to track non-compliance in their child's behavior and to administer punitive consequences, such as ignoring, denying material resources dependent on

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the non-compliance, or delivering clear commands that terminate the unwanted behavior (De Veer 1990; Kuczynski 1990; Brenner and Fox 1998).

An incident of misbehavior can trigger a number of parental disciplinary reactions that may take place in order to regulate the child's behavior and the situation in which the behavior occurs (Janssens et al. 1992; Grusec and Goodnow 1994; McIntyre and Dusek 1995; Russel and Russel 1996). Some of these reactions are described below:

- a. **Power assertion:** defined as behavior that results in considerable external pressure on the child to behave according to the parent's desires. Power assertion is a type of discipline with a wide variety of patterns, including physical punishment, withdrawal of privileges or material resources, displays of anger, commands, disapproval, shame and humiliation. There is a distinction between physical and non-physical punishment and between actual distribution of punishment and the threat of punishment (Trickett and Kuczynski 1986; Trickett and Susman 1988; Grusec and Goodnow 1994; Russel and Russel 1996). Physical punishment refers to parental behavior that causes pain or fear, for example by hitting. Non-physical punishment means refusal to grant privileges such as food or toys. This also includes denial of freedom to move, or confronting the child with perceived negative experiences such as extra domestic tasks or being put to bed early. Further non-physical punishment refers to verbal, disapproving reactions such as scolding, ridiculing, appealing to self-esteem, expressing disappointment, and demanding compliance. Kuczynski et al. (1987), Holden (2002) and Gershoff (2002) made a distinction between friendly requests and commands. The commands can be given indirectly, by simple prohibition (stop!), by indicating explicitly what is required, or by a non-verbal command such as a direct stare. If these commands are given in combination with instruction and guidance regarding the misbehavior and highlighting the misbehavior, the punishment can be considered part of a disciplinary response (Gershoff 2002; Ateah 2003)
- b. **Giving information:** the parents are making clear that the child must obey, informing the child about the material, emotional, or social consequences of the transgression for someone else, and about the moral values and norms, explaining what is required or referring to previous or similar circumstances. The child is confronted with the consequences of his behavior for himself, and the parent attempts to induce the child to voluntary compliance with the parent's wishes (Hoffman 1983, 1994; De Veer 1990; Janssens et al. 1992; Grusec and Goodnow 1994; Ateah 2003).
- c. **Love withdrawal:** is defined as non-physical expression of the parent's anger or disapproval of the child (e.g., ignoring, isolating, or rejecting the child), with the

implication that love will not be reinstated until the child behaves in conformity with the parent's wishes (Hoffman 1983; De Veer 1990). This type of behavior may have an impact on internalization by way of its effect on the child's sense of security (Grusec and Goodnow 1994).

Most parents use a combination of effective and ineffective practices based on situational demands (Grusec and Goodnow 1994; Locke and Prinz 2002). In the next paragraph we will further elaborate on the above-mentioned classification on the situational level.

#### **1.4.2 The interaction approach in parent-child relationship research**

Research in the field of parent-child interaction considers behavior a result of situational characteristics and personality traits (Endler and Magnuson 1976; Gerris 1984). Endler and Magnusson (1976) and Magnusson (1988) suggested that the individual's actual behavior is a function of the feedback between the individual and the situation he/she encounters, that the individual interprets the situations and assigns meaning to them; that emotions are important factors in the interaction process and ultimately emphasize the importance of the psychological meaning of the situation. In a pilot study of child discipline in problematic situations in Dutch families, Gerris et al. (1988) suggested that the perception of the subjective situation and its interpretation are important. Their findings agree with the studies of Janssen and Gerris (1987) and Siebenheller (1988) which proposed the importance of the parental situation-bound emotions and the importance of the intensity of the emotions on the discipline behavior of the parents. Moreover, Gerris et al. (1988) found indications that the reactions of the parents were not exclusively power assertion or induction, but a mix of both techniques. For example, a parent can give information about the infringement and punish at the same time as Hoffman (1984), Janssens et al. (1986), Gerris and Janssens (1987), Grusec and Goodnow (1994) had already previously established. The various forms of discipline are interrelated with variables that include characteristics of the child's misdeed, the child, and the parent.

Because the theoretical considerations of the current study are primarily based on the studies of Siebenheller (1990) and Korzilius (1996), we shall review the most important results of these two studies. Siebenheller (1990) and Korzilius (1996) described the parental perceptions that denote the structure underlying the parental judgment of the child-rearing situations, the cognitions that represent the structure underlying parental considerations that parents may have in child rearing situations, the emotions, and the disciplinary responses in problematic child

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rearing situations. Additionally, they looked at the possible relations between these aspects, and at the way that parent, child and situation characteristics relate to each other.

Siebenheller (1990) studied the parent-child interaction in various problematic rearing situations within the interactionistic approach (Peters 1985; Magnusson 1988). Both the situational and parental characteristics explain, in an additive way, the emotions, and the disciplinary reactions of the parents. According to this approach, the parental disciplinary reaction is defined by the interaction of both personal (parent and child) and situational characteristics.

Siebenheller (1990) used a Q-sorting procedure to classify thirty problem situations with children according to perceived similarity. This resulted in six situation characteristics which formed three dimensions. The dimensions contained the perceived categorized similarities of child rearing aspects.

- a. The first dimension was formed by the situational characteristics in which the child was perceived as a victim versus the child who is perceived as a transgressor.
- b. The second dimension included situational characteristics in which the child is perceived as impulsive and having low self-control versus the child who is passive.
- c. The third dimension was formed by situations in which the child is perceived as transgressor against house rules, versus the child who has personality problems.

Siebenheller (1990) found that parental characteristics were related in particular to these behaviors:

- a. power assertion: the parent is strict and requires immediate submission and obedience to the rules. The parent may also use prohibitions and keep a tight rein on the transgressing child.
- b. induction: control attempts which induce internalization of motivation based on reasoning. This includes different kinds of verbal communications such explanation of rules or offering reasons for desired behavior

Siebenheller (1990) found that parents reacted with power assertion and demonstrated emotions such as anger, annoyance and rejection in situations in which the child was perceived as a transgressor, when the child lacked self-control, or when the child transgressed against the rules of the house. The parents then frequently regarded the child himself as the cause of these behaviors. In situations in which the child was not held responsible for his own behavior, the parents used less power assertion and showed inductive behavior. However, in all situational characteristics, the parents used both induction and power assertion. Moreover, Siebenheller (1990) found that emotions appeared to be strong predictors of power assertive



behavior, and weak predictors to inductive behavior. When the influence of emotional reactions was ruled out, it appeared that the perception of differences between the situations was enough reason for the parents to react with different intensities of power assertion and induction.

Siebenheller looked also at the parental characteristics such as the attitudes 'warmth' or 'affective quality of parent-child interaction', restrictiveness, and granting autonomy. He established that, in cases where the affective bond was weak, parents were more restrictive, used more power assertion behaviors, and displayed more emotions of anger and disappointment, than in situations when the parents were 'warm'. 'Warm' parents seemed to apply the same level of induction in all situation characteristics, while parents who were 'less warm' appeared to react variously according the situation characteristics. Siebenheller (1990) did not find that child-characteristics yielded any differences in the use of disciplinary behavior by parents. However, with children with difficult temperaments, the intensities of parental anger, annoyance, and powerlessness were higher. Similar effects have been shown for the variables, autonomy granting, and restrictiveness, in relation to the degree of induction in various situations.

The findings of Siebenheller confirmed the idea that personal characteristics of the parents, as well as situational characteristics, appeared to be important antecedents of parental reactions. In a follow-up study about mental representations of parenting, Korzilius (1996), established that there is a sequence of perception-cognition-emotion-behavior that can adequately describe the parent-child interaction from the parent's point of view.

According to Korzilius (1996), the blanket term 'parental mental representations' in relation to child rearing, covers all these aspects of the parent-child interaction, i.e. images or pictures that parents have in mind and which may be supposed to provide information for the onset and guidance of goal directed behavior. He divided these representations into mental (perceptions, cognitions, and emotions) and behavioral (reactions) parental representations.

The perceptions outlined in this research are divided into three dimensions and are in accordance with the previously dimensions described by Siebenheller (1990). In addition, Korzilius (1996) identified five cognitive orientations (i.e. norms orientation - the parent postulates norms of appropriate behavior; dissociating orientation - the parent denies what happened or diverts his attention from the situation; child centered considerations - the parent is focused on the needs of the child; norms instruction orientation - the parent wants the child

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to learn from his experiences, and parent centered authority - the parent is focused on his own need and wishes).

Further, he found two emotional factors labelled as 'worry' (e.g., feelings of anxiety, fear, sadness, powerlessness) and 'anger and irritation' (e.g., feelings of anger, irritation, annoyance, disappointment).

Finally, Korzilius (1996) showed four factors on the situation level which describe behavior modification strategies in which parents interfere and try to regulate and control the behavior of the child:

- a. Ad hortative behavior: the parent 'comforts', 'talks about what is going on', 'encourages different behaviors', 'supervision and monitoring the child's activities'. This behavior resembles the concept of 'induction' (e.g. giving explanations) used by Geris and Janssen (1987); Janssen and Geris (1988) Siebenheller (1990) and 'demandingness' used by Baumrind (1983, 1996).
- b. 'Laissez faire': the parent 'refrains from reaction', 'ignores', 'shows no reaction' and, does not 'intervene'. The parent does not exercise control and allows the child to regulate his own behavior (Grusek and Kuczynski 1980; Baumrind 1983, 1996).
- c. Power assertion: the parent is 'having serious words with the child', 'requests for compliance, 'obedience', 'expresses disappointment', 'gives reprimands, prohibitions, non-physical punishment'. The behavior of these parents is characterized by strictness and enforcement of the rules, by setting narrow limits, and by contingent use of positive or negative reinforcers immediately following desired or prohibited child behavior, respectively, which are all characteristics for power assertion (Maccoby and Martin 1983; Baumrind 1996; Gershoff 2002; Holden 2002; Ateah 2003).
- d. Other-oriented induction: the parent indicates the 'implications of the child's behavior on other people', explains to the child the consequences of his behavior and proposes rules for more desirable behavior.

Ultimately, parental behavior is mainly explained by emotional factorial structures - 'worry' and less by the 'anger and irritation' emotional orientation (Korzilius 1996).

'Worry' includes feelings of fear, anxiety, compassion, and powerlessness. 'Worry' indicates that the parent feels deeply troubled by the behavior of the child. 'Anger and irritation' includes feelings of anger, annoyance, disappointment, and rejection, and is considered as a 'negative emotional orientation'.

Korzilius (1996), in a model which explored the parental reactions, showed specific sequences of parental perceptions, parental cognitions, and parental emotions necessary to

explain specific parental behavioral reactions. He considered these relationships as ‘main routes of parenting’ since they are characteristic patterns on the parental reaction in the parent-child interaction. These outcomes agree with the ideas of Bacon and Ashmore (1986). They maintained that, in a sequence, parents first monitor the behavior of the child. Subsequently, attention is aroused. The attention triggers cognitive processes. Categorization of the child’s behavior is very important in this situation. Parents are comparing the perceived child behavior with existing dimensions of child behavior in their mind. The child’s behavior also triggers emotional reactions and, eventually, a behavioral reaction. For example, the perception of the child as impulsive triggers a cognitive orientation on norms and a cognitive orientation on parent-centered authority. Both cognitive orientations intensified emotional orientations of anger and irritation and affected parental power assertive reactions.

Korzilius (1996), also looked into the background characteristics of the parents and the children, i.e. the sex and age of parent and child, number of years of education, occupational status, family climate, and a number of attitudes pertaining to parent child interaction such as warmth and restrictiveness. He compared the various subgroups (such as mothers and fathers) in relation to the structure in parental representations. He found that the parental mental representations are comparable for differentiated groups of parents. In particular it means that the aspects by which parents perceived and experienced emotions in child-rearing situations were more or less similar within the various groups of parents. It also appears from this study that the structures in the parental mental representations are fairly invariable resulting in similar structures of reactions in a given child-rearing problem situation.

It should also be mentioned that Korzilius and Siebenheller employed different units of analysis. Siebenheller (1990), examined the parental level, whereas Korzilius, (1996) examined the parent in the situation. In Siebenheller’s study, the parent was followed in his behavior in different confrontations with problematic child behavior. According to this method, the behavioral reaction was sometimes defined by the situation, sometimes by the parent as a person, and sometimes by the sum of these effects. In the study of Korzilius, the situational information is a subjective assessment of the parent in the situation. The data are measured at an interactional level: subjective parental mental representations in child rearing situations. Additionally, these results showed the structure underlying the parental mental representations in valid and representative child-rearing situations are meaningful linked to parenting behaviors (Korzilius 1996; Korzilius et al. 2001).

## **1.5 Research questions**

There was a lack of empirical evidence in the literature reviewed concerning disciplining behavior of dog owners. Because of this, it is difficult to test hypotheses on this subject in the current study. Most of the research concerning the antecedents of dog discipline cited in the present study regards the antecedents of the reactions of parents in every-day child-rearing situations.

Thus, the framework for the research questions in the present study is based upon the assumption that, as with parent-child interactions in problematic situations (Siebenheller, 1990; Korzilius, 1996), the immediate antecedents of the owner's disciplinary attempts are associated with the owner's perceptions of the dog's problematic behavior and with the emotional reactions to this behavior.

As suggested by Askew (1996) with dogs, and claimed by Siebenheller (1990), and Korzilius (1996), with children, misbehavior has no absolute values; it depends on the owner's/parent's perception of the specific behavior in a given situation. Perceptions, cognitions and emotions related to problematic situations are social representations interlinked with ideas and attributions which people hold about the nature of the social world. They do not respond to external stimuli as such, but to the categories people use to classify such images and the names they assign to them (Goodnow and Collins 1988). The classification helps to give meaning to the events.

Therefore, in order to achieve a systematic description of problematic dog-rearing situations we need to make an inventory of behavior problems which the owners consider problematic. This will answer the question:

1. Which daily situations do the dog owners consider to be problematic?

In addition, the items of inventory are subjected to a Q-sorting procedure (Peters 1985; Gerris et al. 1988) to answer the question:

2. How are these situations perceived and interpreted by the owners?

The data collected in the Q-sorting procedure express the similarity of the situations in the perception of the dog owners. By means of hierarchical clusters and multidimensional scaling, the data will be reduced to dimensions and clusters. The data reveal the dog owner's perception of the problem situations with the dog.

The following step will be to determine the magnitude (intensity) and the structure of situation-specific emotional and behavioral reactions of dog owners to problematic situations involving dogs. The following questions are addressed:

3. What is the magnitude (intensity) of the dog owner's emotional and behavioral reactions in dog-rearing situations that the dog owner considers problematic?
4. What is the structure of the underlying factors of the dog owner's emotional and behavioral reactions to problematic situations involving dogs?

The structure of the owner's emotional and behavioral reactions will be established by means of factor analysis.

Further the current study addresses the question of whether there are relationships in dog rearing among the dog owner's representations by means of an exploratory path model.

5. What are the possible relationships among the owner's perceptions, emotional, and behavioral reactions in problematic situations with their dog?

The possible presence of such relationships will be explored by means of regression analysis. Belsky (1984), Grusek and Goodnow (1994), Brenner and Fox (1998), Ateah (2003) proposed that, for parent-child interactions, the parental personality provides a filter through which parents view and respond to the child. Similar assumptions were made by Askew (1996) and Overall (1997) about owner-dog interaction. Traits such as sex of the respondent (Serpell 1998; Fagan and Barnett 2003), attachment (Siegel 1990; Weiss 1991; Topal et al. 1998), loneliness, and perception of social support (McNicholas and Collis 1998, 2000) as well as oriented attitudes such as affection (warmth), and restrictiveness (Siebenheller 1990; Korzilius 1996) may be related to pet-ownership and particularly to disciplinary reactions of the dog owner in problem situations with the dogs. The attitudes concerned with dog-rearing in problem situations involving dogs were determined:

6. What is the structure of the underlying factors of the dog owner's attitudes in problematic situations involving dogs?

The structure of the owner's attitudes will be established by means of factor analysis. Additionally, the following question was addressed:

7. What are the possible relationships among owner's dog-related attitudes in problematic situations involving dogs, attachment, and social support and the owners' perceptions, emotional and behavioral reactions in problematic situations involving dogs?

The possible presence of such relationships will be established by means of regression analysis.

In the present study we look further at the possible effect of the sex of the owner on the perceptions of, emotional and behavioral reactions, and on the owner's attitudes.

8. To what degree does the sex of the dog owner create variations in the structure of the

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situation-specific emotional and behavioral reactions and in the relationships among the owner's perceptions, emotions, behavioral responses and owner attitudes in problem situations with the dog?

By analyzing these issues, it should be possible to assess how male and female owners refer to problem situations concerning dogs.

As mentioned above, this study was derived from similar studies about child discipline in problem situations. As the purpose of this study was also to assess whether child discipline and dog discipline bear some resemblance to each other, the following question was addressed:

9. What are the similarities and dissimilarities between the processes that take place in child discipline situations and a dog-discipline situations?

In conclusion, this study will examine the content of the dog owners' perceptions, emotions, and behaviors as they are described in dog-rearing situations and the structures of these owner representations (e.g. dimensions and factors underlying owner emotions and behavioral responses). The answer to these questions will be presented in Chapter 2 (question 1 and 2) and Chapter 3 (question 3 and 4). Next, this study will explore the patterns among the situation-specific owner representations and attitudes in dog-rearing situations. The answer to these questions will be presented in Chapter 4 (question 5) and Chapter 5 (question 6 and 7). In each chapter we will explore the extent of sex-specific differentiation (question 8). In each chapter and explicitly in Chapter 6 we will examine whether these results are compatible with parental representations in child rearing situations (question 9) [mainly the studies of Siebenheller 1990 and Korzilius 1996].

## References

- Ainsworth, M.D., Blehar, M.C., Waters, E. and Wall, S. 1978. *Patterns of Attachment. A Psychological Study of the Strange Situation*. Hillsdale NY: Laurence Erlbaum Associates Inc.
- Albert, A. and Bulcroft, K. 1987. Pets and their urban life. *Anthrozoös*. 1(1). 9-23.
- Albert, A. and Bulcroft, K. 1988. Pets, family and the life course. *Journal of Marriage and the Family*. 50(2). 543-552.
- Allen, D. T. 1997. Effect of dogs on human health. *Journal of the American Veterinary Medical Association*. 210(8). 1136-1139.
- Allen, D. T. and Blaskovich, J. 1996. The value of service dogs for people with severe ambulatory disabilities. *The Journal of the American Medical Association*. 275. 1001-1006.
- Appleby, D. and Pluijmakers, J. 2003. Separation anxiety in dogs. The function of homeostasis in its development and treatment. *The Veterinary Clinics of North America. Small Animal Practice*. 33. 321-344.
- Askew, H. R. 1996. *Treatment of Behaviour Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Scientific Publications.
- Ateah, C.A. 2003. Disciplinary practices with children: Parental sources of information, attitudes, and educational needs. *Issues in Comparative Pediatric Nursing*. 26. 89-101.
- Atkinson, M.P. and Blackwelder, S.P. 1993. Fathering in the 20<sup>th</sup> century. *Journal of Marriage and the Family*. 55. 975-986.
- Bacon M.K. and Ashmore, R.D. 1986. The moderator-mediator variable distinction in social psychological research: conceptual strategic, and statistical considerations. *Journal of Personality and Social Psychology*. 51. 1173-1182.
- Bahling-Piering, Z. and Turner, D.C. Anthropomorphic interpretations and ethological descriptions of dog and cat behavior by lay people. *Anthrozoös*. 14(2). 205-210.
- Baumrind, D. 1983. Rejoinder to Lewis's reinterpretation of parental firm control effects: Are authoritative families really harmonious? *Psychological Bulletin*. 94(1). 132-142.
- Baumrind, D. 1996. De discipline controversy revisited. *Family relations*. 45. 405-414.
- Beaver, B.V. 1994. Owner complains about canine behavior. *Journal of American Veterinary Medical Association*. 204. 1944-1946.
- Beata, C.A. 2001. Diagnosis and treatment of aggression in dogs and cats. In Houpt, K.A. (ed). *Recent Advances in Companion Animal Behavior Problems*. Ithaca, New York: International Veterinary Information Service (www.ivis.org).
- Beck, A. and Katcher, A. 1996. *Between Pets and People. The Importance of Animal Companionship*. West Lafayette Indiana: Purdue University Press.
- Belsky, J. 1984. The determinants of parenting: A process model. *Child Development*. 55. 83-96.
- Bergler, R. 1988. *Man and Dog. The psychology of a Relationship*. Oxford: Blackwell Scientific Publications.
- Borchelt, P. L. and Voith, V. L. 1986. Dominance aggression in dogs. *Compendium on Continuing Education for the Practicing Veterinarian*. 8. 36-44.
- Bowlby, J. 1973. *Attachment and Loss: Vol. 2. Separation: Anxiety and Anger*. New York: Basic Books.
- Bowlby, J. 1979. *The Making and Breaking of Affectional Bonds*. London: Tavistok.
- Bradshaw, W. and Nott, H.M.R. 1995. Social and communication behaviour of companion dogs. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 115-130.

## General Introduction: The dog owner in dog-rearing situations

- Brenner, V. and Fox R.A. 1998. Parental discipline and behavior problems in young children. *The Journal of Genetic Psychology*. 251-256.
- Budge, R.C., Spicer, J., Jones, B. and George, R. St. 1998. Health correlates of compatibility and attachment in human-companion animal relationships. *Society and Animals*. 6(3).
- Burghardt, W.F. 2003. Behavioral considerations in the management of working dogs. *The veterinary Clinics. Small Animal Practice*. 33. 417-446.
- Cain, A.O. 1985. Pets as family members. In Sussman, M.B. (ed). *Pet and family. Marriage and Family Review*. 8(3/4). 2-10.
- Cambell, W.E. 1986a. The prevalence of behavioural problems in American dogs. *Modern Veterinary Practice*. Jan. 28-31.
- Cambell, W.E. 1986b. Effects of training, feeding, regiments, isolation and physical environment on canine behaviour. *Modern Veterinary Practice*. March. 239-241.
- Cambell, W.E., 1995. How dogs think: A non-verbal link to canine communication. [www.siriusdog.com/articles/cognitive-behavior-dog-campbell.htm](http://www.siriusdog.com/articles/cognitive-behavior-dog-campbell.htm) (rev.may, 2003).
- Chapman, B.L. and Voith, V.L. 1990. Behavioral problems in old dog: 26 cases (1984-1987). *Journal of American Veterinary Medical Association*. 196(6). 944-946.
- Clark, G. I. and Boyer, W.N. 1993. The effects of dog obedience training and behavioral counseling upon human-canine relationship. *Applied Animal Behaviour Science*. 37. 147-159.
- Collis, G.M. and J. McNicholas. 1998. A theoretical basis for health benefits of pet ownership. In Wilson, C.C. and. Turner, D.C. (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.
- Coren, S. 2000. *How to Speak Dog: Mastering the Art of Dog-Human Communication*. The Free Press
- Cusak, O. (1988). *Pets and Mental Health*. New York: Howorth Press.
- Deković, M. 1991. *The Role of Parents in the Development of Child's Peer Acceptance*. Doctoral dissertation. Nijmegen: University of Nijmegen.
- Dehasse, J. 1999. *Dog Dominance and Aggression*. Lecture given at the 9th Annual General Meeting, 1st ASEAN Small Animal Scientific Conference - Small Animal Practitioners Association of Malaysia - Selangor Darul Ehsan (Kuala Lumpur).
- Dehasse, J. 2001. *Managing the Owner in Dog Training*. Lecture for the 2-nd Belgian ABPC symposium.
- DiGiacomo, N., Arluke, A., and Patronek, G.J. 1998. Surrendering pets to shelters: the relinquishers perspective. *Anthrozoös*. 11. 41-51.
- Dodman, N. 1999. *Dogs Behaving Badly. An A-Z Guide to Understanding and Curing Behavioral Problems in Dogs*. Bantam Books.
- Eddy, T.J., Gallup, G.G., and Povinelli, D.J. 1993. Attribution of cognitive states to animals: Anthropomorphism in comparative perspective. *Journal of Social Issues*. 49(1). 87-101.
- Endler, N.S. and Magnusson, D. 1976. Personality and person by situation interactions. In Endler, N.S. and Magnusson, D. (eds). *Interactional Psychology and Personality*. Washington DC: Hemisphere.
- Fagan, J. and Barnett, M. 2003. The relationship between maternal gatekeeping, paternal competence, mothers' attitudes about the father role, and father involvement. *Journal of Family Issues*. 24(8). 1020-1043.
- Fisher, J. 1993. A behavioral approach to training. In Fisher, J. (ed). *The Behavior of Dogs and Cats*. London: Stanley Paul. 113-129
- Fogle, B. 1990. *The Dog's Mind*. London: Pelham Books.



- Friedmann, E., Thomas, S. A., & Eddy, T. J. 2000. Companion animals and human health: Physical and cardiovascular influences. In Podberscek, A. L., Paul, E., and Serpell, J. A. (eds). *Companion Animal and Us*. Cambridge: Cambridge University Press. 125-142.
- Gallup, G.G., Morino, L and Eddy, T.J. 1997. Anthropomorphism and the evolution of social intelligence: A comparative approach. In Mitchell, R.W., Thompson, N.S. and Miles, H. L. (eds). *Anthropomorphism, Anecdotes, and Animals*. Albany: State University of New York Press.
- Garrity, T. F., & Stallones, L. 1998. Effects of pet contact on human well-being: Review of recent research. In Wilson, C. C. and Turner, D. C. (eds). *Companion Animals in Human Health* Thousand Oaks, CA: Sage. 3-22.
- Gerris, J.R.M. 1984. *Projectschets 'Gezinskenmerken Problematische Opvoedingssituaties'* (Research project family characteristics and problematic child-rearing situations). Nijmegen: Katholieke Universiteit Nijmegen.
- Gerris, J.R.M. and Janssens, J.M.A.M. 1987. Opvoedingsgedrag van ouders in overtredingsituaties: een onderzoek naar beïnvloedende factoren (Child-rearing practices in disciplinary situations: A study to causal factor. *Pedagogische Studiën*. 64. 295-307.
- Gerris, J.R.M., Vermulst, A.A. and Franken, W.M.F. 1988. Een interactionistische georiënteerde interviewmethode. Een inventarisering van opvoedingssituaties die ouders als problematisch ervaren. (Interactionistic oriented interviewing: An inventory of problematic child-rearing situations). In Schoorl, R.M., Wijnekus, M.C. and Vries, de, A.K. (eds). *Gezinsonderzoek: Methoden in de Diagnostiek*. Nijmegen: Dekker en v/d Vegt. 75-110.
- Gerris, J.R.M., Vermulst, A.A. and Siebenheller, F.A. 1990. Overeenstemming tussen ouders: onderliggende dimensies en samenhangen met opvoedingsoriëntaties en opvoedingsgedragingen van vaders en moeders afzonderlijk (Agreement between parents: underlying dimensions and relationships with child-rearing orientations and child-rearing behaviors of fathers and mothers separately) In Gerris, J.R.M. and Acker van, J. (eds). *Gezin: Aspecten van Sociale Ondersteuning en Intern Functioneren*. Amsterdam/Lisse: Swets&Zeitlinger. 147-173.
- Gerris, J.R.M., Vermulst, A.A., Boxel van, Janssens, J.M.A.M., Zutpen, van, R.A.H. and Felling A.J.A. 1993. *Parenting in Dutch Families: A Representative Description of Dutch Family Life in Terms of Validated Concepts Representing Characteristics of Parent, Children, the Family as a System and Parental Socio-cultural Value Orientations*. Institute of Family Studies. Nijmegen: University of Nijmegen.
- Gershoff, E.T. 2002. Corporal punishment, by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*. 128(4). 539-579.
- Goodnow, J.J. 1984. Parent's ideas about parenting and development: A review of issues and recent work. In Lamb, M.E., Brown, A.L. and Rogoff B. (eds). *Advances in Developmental Psychology*. 3. Hillsdale NJ: Lawrence Erlbaum Associates Inc. 193-242.
- Goodnow, J.J. 1988. Parent's ideas, actions and feelings: Models and methods from developmental and social psychology. *Child Psychology*. 59. 286-320.
- Goodnow, J. J. and Collins, W. A. 1990. *Development According to Parents: The Nature, Sources and Consequences of Parents' Ideas*. London: Lawrence Erlbaum Associates Inc.
- Gosse, G. H., and Barnes, M. J. (1994). Human grief resulting from the death of a pet. *Anthrozoös*. 7. 103-112.

## General Introduction: The dog owner in dog-rearing situations

- Grusec, J.E. 1997. A history of research on parenting strategies and children's internalization of values. In Grusec, J.E. and Kuczynski, L. (eds). *Parenting and Children's Internalization of Values. A Handbook of Contemporary Theory*. New York: Wiley. 3-22.
- Grusec, J.E. and Kuczynski, L. 1980. Direction of effects in socialization: A comparison of the parent's versus the child's behavior as determinants of disciplinary techniques. *Developmental Psychology*. 16. 1-9.
- Grusec, J.E. and Goodnow J.J. 1994. Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*. 30 (1). 4-19.
- Hart, B.L. 1985. Behavioural profiles of dog breeds. *Journal of the American Veterinary Medical Association*. 6(11). 1175-1185.
- Hart, B.L. 1995. Analysing breed and gender differences in behavior. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People*. Cambridge: Cambridge University Press. 65-78.
- Hart B.L. and Hart, L.A. 1985. *Canine and Feline Behavioural Therapy*. Philadelphia: Lea & Febiger.
- Hart, B.L. and Eckstein, R.A. 1997. The role of gonadal hormones in the occurrence of objectionable behaviours in dogs and cats. *Applied Animal Behaviour*. 52. 331-344.
- Hart, B.L. and Hart, L.A. 1997. Selecting, raising, and caring for dogs to avoid problem aggression. *Journal of the American Veterinary Medical Association*. 210(8). 1129-1134.
- Hart, C H., Nelson, D.A., Robinson, C.C., Olsen, S.F. and McNeilly-Choque, M.K. 1998. Overt and relational aggression in Russian nursery-school children: Parenting Style and marital linkages. *Developmental Psychology*. 34(4). 687-697.
- Hart, L.A. 1995. Dogs as human companions: A review of the relationship. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 161-178.
- Hecht, L. McMillin, J.D. and Silverman, P. 2001. Pets, networks and well-being. *Anthrozoös*. 14(2). 95-105.
- Houpt, K.A. 1983. Disruption of the human-companion animal bond: aggressive behaviour in dogs. In Kathcher, A.H. and Beck A.M. (eds). *New Perspectives on our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press.
- Houpt, K.A. 1991. Feeding and drinking behaviour problems. *Veterinary Clinics of North America: Small Animal Practice*. 21. 281-298.
- Herzog, H.A., Betuart, N.C. and Pittman, R.B. 1991. Gender, sex role orientation, and attitudes towards animals. *Anthrozoös*. 4(3). 184-191.
- Hoffman M.L. 1983. Affective and cognitive processes in moral internalization. In Higgins, E.T., Ruble, D.N. and Hartup, W.W. (eds). *Social Cognition and Social Development. A Socio-Cultural Perception*. Cambridge: Cambridge University Press.
- Hoffman M.L. 1984. Parent disciplining, moral internalization, and development of pro-social motivation. In Staub, E., Bar-Tal, D., Karyloski, J. and J. Reykowski (eds). *Developmental and Maintenance of Prosocial Behavior*. New York: Plenum Press.
- Hoffman M.L. 1994. Discipline and internalization. *Developmental Psychology*. 30(1). 26-28.
- Holden, G.W. 2002. Perspectives on the effects of corporal punishment: Comment on Gershoff (2002). *Psychological Bulletin*. 128(4). 590-595.
- Horna, J., Lupri, E. and Mills, D. L. 1984. Dilemmas in researching family works. *International Journal of Comparative Sociology*. 25. 189-192.

- Horwitz, D.F. 2001. Dealing with common behavior problems in senior dogs. *Veterinary Medicine*. Nov. 869-879.
- Hubrecht, R and Turner, D.C. Companion animal welfare in private and institutional settings. In Wilson, C.C. and Turner, D.C. (eds). 1998. *Companion animals in Human Health*. Sage Publications. 267-291.
- Hunthausen, W. 1997. Effect of aggressive behavior on canine welfare. *Journal of the American Veterinary Medical Association*. 210(8). 1134-1136
- Jagoe, J.A. 1994. *Behavioural problems in the dog: a retrospective and prospective study to identify factors influencing their development*. Ph.D. Dissertation, University of Cambridge.
- Jagoe, J. A. and Serpell J. 1996. Owner characteristics and interactions and the prevalence of canine behaviour. *Applied Animal Behaviour Science*. 47. 31-42.
- Janssens J.M.A.M. Janssen A.W.M., Bernaerts, M. and Gerris J.R.M. 1986. Disciplineringsgedrag van ouders en kenmerken van overtredingssituaties (Discipline behaviour of parents and characteristics of transgression situations) In Gerris J.R.M. (ed). *Pedagogisch Onderzoek in Ontwikkeling*. Nijmegen: ITS.
- Janssens J.M.A.M. and Gerris J.R.M. 1987. *Child Rearing: Influence on Prosocial and Moral Development*. Amsterdam: Swets and Zeitlinger. 169-196.
- Janssens J.M.A.M. and Gerris J.R.M. 1988. Sociaal milieu en reacties van ouders op disciplineringsituaties: een empirisch verklaringsmodel. *Pedagogische Studiën*. 65.185-197.
- Johnson, T.P., Garrity, T.P. and L. Stallones. 1992. Psychometric evaluation of the Lexington attachment to pets scale (LAPS). *Anthrozoös*. 5(3). 160-175.
- Katcher, A. H. 1989. How companion animals make us feel. In Hoage, R. J. (ed). *Perceptions of Animals in American Culture*. Washington, DC: Smithsonian Institution Press. 113-127.
- Kendziora K.T. and O'Leary, S.G. 1998. Dysfunctional parenting as a focus for prevention and treatment of child behavior problems. *Advances in Clinical Child Psychology*. 15. 175-26.
- King, T, Hemsworth, P.H. and Coleman G.I. 2003. Fear of novel and startling stimuli in domestic dogs. *Applied Animal Behaviour Science*. 82. 45-64.
- Knight, S., Vrij, A., Cherryman, J and Nunkoosing, K. 2004. Attitudes towards animal use and belief in animal mind. *Anthrozoös*. 17(10). 43-62
- Knol, B.W. 1987. Behavioural problems in dogs: Problems, diagnoses, therapeutic measures, and results in 133 patients. *Veterinary Quarterly*. 9. 226-234.
- Kochanska, G., Aksan, N. and Nichols, K.E. 2003. Mental power assertion in discipline and moral discourse contexts: Commonalities, differences, and implications for children's moral conduct and cognition. *Developmental Psychology*. 39(66). 949-963.
- Korzilius, H. P. L. M. 1996. *Mental Representations of Parenting. Structures of Perceptions, Cognitions, Emotions, and Behavioural Responses in Child-Rearing Situations*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Korzilius, H. P. L. M., Gerris, J.R.M. and Felling, A.J.A. 2001. Exploration of mental scripts of perceptions, cognitions, and emotions, explaining parenting behaviors. In Gerris, J.R.M. (ed). *Dynamics of Parenting*. Leuven, Apeldoorn: Garant. 391-427.
- Kuczynski, L. 1984. Socialization goals and mother-child interaction: Strategies for long-term and short-term compliance. *Developmental Psychology*. 20. 1061-1073.
- Kuczynski, L., Kochanska, G., Radke-Yarrow, M. and Girnius-Brown, O. 1987. A Developmental Interpretation of Young Children's Noncompliance. *Developmental Psychology*. 23(6). 799-806.

## General Introduction: The dog owner in dog-rearing situations

- Kuczynski, L. and Kochanska, G. 1990. Development of children's noncompliance strategies from toddlerhood to Age 5. *Developmental Psychology*. 26(3). 398-408.
- Lago, D., Kafer, R., Delaney, M., and Connell, C. (1988). Assessment of favourable attitudes toward pets: Development and preliminary validation of self-report pet relationship scales. *Anthrozoös*, 1, 240-254.
- Landsberg, G.M. 1991. The distribution of canine behaviour cases at three behaviour referral practices. *Veterinary Medicine*. Oktober. 1011-1018.
- Landsberg, G.M., Hunthausen, L. and Ackerman, L. 1997. *Handbook of Behaviour Problems of the Dog and Cat*. Oxford: Butterworth-Heinemann.
- Lane, D.R. McNicholas, J. and Collis, G.M. 1998. Dogs for the disabled: benefits to recipients and welfare of the dog. *Applied Animal Behaviour Science*. 59. 49-60.
- Ledger, R.A. and Baxter M.R. 1997. The development of a validated Test to assess the temperament of dogs in a rescue shelter. In Mills, D.S., Heath, S.E. and Harrington, L.J. (eds). *Proceedings of the First International Conference on Veterinary Behavioural Medicine*. Birmingham, UK. 87-92.
- Locke, L.M. and Prinz, R.J. 2002. Measurement of parental discipline and nurturance. *Clinical Psychology Review*. 22. 895-929.
- Lockwood, R. 1995. The ethology and epidemiology of canine aggression. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 131-152.
- Luescher, A.U. 2003. Diagnosis and management of compulsive disorders in dogs and cats. *The Veterinary Clinics. Small Animal Practice*. 33. 253-264.
- Lund, J.D., Agger, J.F., and Vestergaard, K.S . 1996. Reported behaviour problems in pet dogs in Denmark: age distribution and influence of breed and gender. *Preventive Veterinary Medicine*. 28. 33-48.
- McBride, A. 1995. The human–dog relationship. In Robinson, I. (ed). *The Waltham Book of Human–Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford: Pergamon. 99–112.
- McCrave, E.A. 1991. Diagnostic criteria for separation anxiety in the dog. *The Veterinary Clinics of North America. Small Animal Practice*. 21. 247-245.
- McIntyre, J.G. and Dusek, J.B. 1995. Perceived parental practices and styles of coping. *Journal of Youth and Adolescence*. 24(4). 499-509.
- McNicholas, J. and Collis, G.M. 1995. The end of a relationship: coping with pet loss. In Robinson, I. (ed). *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford, UK: Pergamon. 127-143.
- McNicholas, J. and Collis, G.M. 1998. Could a type A (coronary-prone) personality explain the association between pet ownership and health? In Wilson, C.C., and D.C. Turner (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.
- McNicholas, J. and Collis, G.M. 2000. Dogs at catalysts for social interactions: Robustness of the effect. *British Journal of Psychology*. 91. 61-70.
- Maccoby, E.E. (1992). The role of parents in the socialization of children: an historical overview. *Developmental Psychology*. 28. 1006-1017.
- Maccoby, E.E. and Martin, J.A. 1983. Socialization in the context of the family: parent-child interaction. In Mussen, P.H. (ed). *Handbook of Child Psychology. Vol. 4. Socialization, Personality and Social Development*. New York: Wiley.
- Magnusson, D. 1976. On the psychological situation. *Reports from the Department of Psychology*. University of Stockholm no. 544.
- Magnusson, D. 1988. *Paths Through Life: Vol. 1. Individual Development from an Interactional Perspective: A longitudinal Study*. Hillsdale, New Jersey: Lawrence Erlbaum Associates Inc.

- Mangelsdorf, S.C.; Frosch, C. A. and McHale, J. L. 1998. Fathers' and mothers' parenting during the first three years: Predictors and correlates. *Infant Behavior and Development*. 21. 234.
- Marston, L.C. and Bennett P.C. 2003. Reforging the bond – toward successful canine adoption. *Applied Animal Behaviour Science*. 83. 227-243.
- Miklósi, A.; Kubinyi, E.; Topal, J.; Gacsi, M.; Viranyi, Z. and Csanyi, V. 2003. A Simple Reason for a Big Difference: Wolves Do Not Look Back at Humans, but Dogs Do. *Current Biology*. 13(9). 763-766.
- Miller, D.D., Staats, R. S., Partlo, C. and Rada, K. 1996. Factors associated with the decision to surrender a pet to an animal shelter. *Journal of the American Veterinary Medical Association*. 209. 738-742.
- Miller S.A. 1988. Parents' beliefs about children's cognitive development. *Child Development*. 59. 259-285.
- Millot, J.L. 1994. Olfactory and visual cues in the interaction systems between dogs and children. *Behavioural Processes*. 33. 177-188.
- Mills, D.S. 1997. Separating a dog's bite from it's owner's problem: Conceptualising behaviour problems. In Mills, D.S., Heath, S.E. and Harrington, L.J. (eds). *Proceedings of the First International Conference on Veterinary Behavioural Medicine*. Birmingham UK: Universities federation for animal welfare. UK. 7-9.
- Mitchell, R.W. and Hamm, M. 1997. The interpretation of animal psychology: anthropomorphism or behaviour reading? *Behaviour*. 134. 173-204.
- Mitchell, R.W., Thompson, N.S. and Miles, H. L. 1997. *Anthropomorphism, Anecdotes, and Animals*. Albany: State University of New York Press.
- Mugford, R.A. 1981. Problem dogs and problem owners. In Fogle. B. (ed). *Interrelations Between People and Pets*. Springfield, IL: Charles C. Thomas. 295-317.
- Mugford, R.A. 1995. Canine behaviour therapy. In Serpell, J. (ed.) *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 139-152.
- O'Farrell, V. 1987. *Owner Attitudes and Dog Behaviour Problems*. BSAVA Publications, Gloucester, UK.
- O'Farrell, V. 1989. *Problem Dog: Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1991. *Verhaltenstörungen beim Hund*. Verlag Schaper M. and Alfeld. H.
- O'Farrell, V. 1992. Destructiveness in the owner's absence. In O'Farrell, V. (ed). *Manual of Canine Behaviour*. British Small Animal Veterinary Association. West Sussex.
- O'Farrell, V. 1992. *Problem Dog – Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.
- O'Farrell, V. 1995. Effect of owner personality and attitudes on dog behaviour. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 153-160.
- O'Farrell, V. 1997. Owner attitude and dog behaviour problems. *Applied Animal Behaviour Science*. 52. 205-213.
- Olson, P.N. 2002. The modern working dog - a call for interdisciplinary collaboration. *Journal of the American Veterinary Medical Association*. 221(3). 352-355.
- Overall, K. 1997. Terminology in Behavioural Medicine: Diagnosis, Necessary and Sufficient Conditions and Mechanisms. In Mills, D.S., Heath, S.E. and Harrington, L.J. (eds). *Proceedings of the First International Conference on Veterinary Behavioural Medicine*. Birmingham UK, Universities federation for animal welfare. UK.

## General Introduction: The dog owner in dog-rearing situations

- Overall, K. 1999. Understanding and treating canine dominance aggression: An overview. *Veterinary Medicine*. November. 976-979.
- Overall, K.L. 2001. Evaluation and management of behavioral conditions. In Braund, K.G. (ed). *Clinical Neurology in Small Animals - Localization, Diagnosis, and Treatment*. Ithaca, New York: International Veterinary Information Service [www.ivis.org/special\\_books/Braund/overall](http://www.ivis.org/special_books/Braund/overall).
- Overall, K.L., Dunham, A.E. and Frank, D. 2001. Frequency of nonspecific clinical signs in dogs with separation anxiety, thunderstorm phobia, and noise phobia, alone or in combination. *Journal of the American Veterinary Medical Association*. 219. 467-473.
- Patroneek, G.J., Glickman, L.T., Beck, A.M., McCabe, G.P. and Ecker, C. 1996. Risk factors for relinquishment of dogs to an animal shelter. *Journal of the American Veterinary Medical Association*. 209.572-581.
- Peachy, E. 1993. Problems with people. In Fisher, J. (ed) *The Behaviour of Dogs and Cats*. London: Stanley Paul.104-112.
- Peters, V.A.M. 1985. *Docenten en hun Probleemsituaties. (Teachers and Problematic Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Planchon, L. A., Templer, D. I., Stokes, S. and Keller, J. 2002. Death of a Companion Cat or Dog and Human Bereavement: Psychosocial Variables. *Society and animals*. 10(1). 94-105.
- Podberscek, A.L. and Blackshaw J.K. 1994. The attachments of the humans to pets and their reactions to pet death. *Canine Practice*. 19(5). 16-19.
- Pongrácz, P., Miklósi, A., Timár-Geng, K. and Csányi, V. 2003. Preference for Copying Unambiguous Demonstrations in Dogs (*Canis familiaris*). *Journal of Comparative Psychology*. 117(3). 337-343.
- Poresky, R.H., Hendrix, C., Mosier, J.E. and Samuelson, M.L. 1987. The companion animal bonding scale: internal reliability and construct validity. *Psychological Report*. 60. 743-746.
- Prato-Previde, E, Custance, D.M., Spiezo, C. and Sabatini, F. 2003. Is the dog-human relationship an attachment bond? An observational study using Ainsworth's strange situation. *Behaviour*. 140. 225-254.
- Rajecki, D.W., Rasmussen, J.L. Modlin, S.J. and Holder A.M. 1998. Dogs bites boy: judgements of blame and shame. *Anthrozoös*. 11(2). 66-73.
- Rasmussen, J.L. and Rajecki, D.W. 1995. Differences and similarities in human's perceptions of the thinking and feeling of a dog and a boy. *Society and Animals*. 3(2). 117-137.
- Raupp, C.D. 1999. Treasuring, trashing, or terrorizing: Adult outcomes of childhood socialization about companion animals. *Society and Animals*. 7(2). 141-159.
- Reisner, I. 1991. The pathophysiologic basis of behaviour problems. *Veterinary Clinics of North America: Small Animal Practice*. 21. 207-224.
- Rogerson, J. 1993. Preventing aggression. In: Fisher, J. (ed). *The Behaviour of Dogs and Cats*. London: Stanely Paul. 52-61.
- Rooney, N.J. 1999. *Play behaviour of the domestic dog (Canis Familiaris) and is effects on the dog-human relationship*. PhD thesis. University of Southampton.
- Rooney, N.J., Bradshaw, J.W.S. and Robinson, I.H. 2000. A comparison of dog-dog and dog-human play behavior. *Applied Animal Behaviour Science*. 66. 235-248.
- Ross, C. E. and Willigen, M. van 1996. Gender, parenthood, and anger. *Journal of Marriage and the Family*. 58. 572-584.
- Russel, A. and Russel, G. 1996. Positive parenting and boys' and girls' misbehavior during a home observation. *International Journal of Behavioral Development*. 19. 291-307.

- Sanchesz, L. and Thomson, E. 1997. Becoming Mothers and Fathers. Parenthood, Gender, and the Division of Labour. *Gender and Society*. 747-772.
- Sanders, C.R. 1990. Excusing tactics: Social responses to the public misbehaviour of companion animals. *Anthrozoös*. 4(2). 82-90.
- Sanders, C.R. 1993. Understanding dogs: Caretakers; attributions of mindedness in canine-human relationship. *Journal of Contemporary Ethnography*. July. 205-226.
- Serpell, J.A. 1987. The influence of inheritance and environment on canine behavior: myth and fact. *Journal of Small Animal Practice*. 28. 949-956.
- Serpell, J. A. 1995. The hair of the dog. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 257-262.
- Serpell, J.A. 1996a. *In the Company of Animals*. Cambridge: Cambridge University Press.
- Serpell, J.A. 1996b. Evidence for an association between pet behavior and owner attachment levels. *Applied Animal Behaviour Science*. 47. 49-60.
- Serpell, J. A. 1998. Perceiving and misperceiving guide dogs: reliability of behavioural survey data. *Paper presented at the ISAZ'98 conference, Prague, Czech Republic, 10-12<sup>th</sup> September, 1998*.
- Serpell, J. A. 2002. Anthropomorphism and anthropomorphic selection beyond the 'Cute Response'. *Society and Animals*. 10(4). [www.psyeta.org/sa/sa10.4/Serpell.html](http://www.psyeta.org/sa/sa10.4/Serpell.html).
- Serpell, J.A. and Jagoe, J.A. 1995. Early experience and the development of behaviour problems. In Serpell, J. (ed). *The Domestic Dog: Its evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 79-102.
- Siebenheller, F. A. 1988. Problematische opvoed-ingssituaties: subjectieve percepties, affectieve belevingen en gedragingen van ouders (Problematic child-rearing situations: subjective perceptions, affective reactions and behaviours of parents). In Gerris, J. R. M. and van Acker, J. (ed). *Gezinsrelaties Onderzocht*. Amsterdam/Lisse: Swets and Zeitlinger. 77-98.
- Siebenheller, F. A. 1990. *Problematische Opvoedingssituaties: percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of Antecedents of Reactions of Parents in Every-day Child-rearing Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Siegel, J.M. 1990. Stressful life events and use of physician services among the elderly: the moderating role of pet ownership. *Journal of Personality and Social Psychology*. 58. 1081-1086.
- Siegel, J.M. 1993. Companion animals: in sickness and in health. *Journal of Social Issues*. 49(1). 157-167.
- Simons R., Whitbeck L., Conger R., and Melby, J. 1990. Husband and Wife Differences in Determinants of Parenting: A Social Learning and Exchange Model of Parental Behavior. *Journal of Marriage and the Family*, 52 (2). 375-392.
- Sherman, C.K., Reisner, I.R., Taliaferro, L.A. and Houpt, K.A. 1996. Characteristics, treatment, and outcome of 99 cases of aggression between dogs. *Applied Animal Behaviour Science*. 47. 91-108.
- Slabbert, J.M. and Rasa, O.A.E. 1993. The effect of early separation from the mother on pups in bonding to humans and pup health. *Journal of South African Veterinary Association*. 64. 4-8.
- Snarey, J. 1993. *How Fathers Care for the Next Generation: A Four Decade Study*. Cambridge, MA: Harvard University Press.

## General Introduction: The dog owner in dog-rearing situations

- Soares, C.J. 1985. The companion animal in the context of the family system. In Sussman M.B. (ed). *Pet and family. Marriage and Family Review*. 8(3/4). 49-62.
- Staats, S., Miller, D., Carnot, M.J., Rada, K. and Turnes, J. 1996. The Miller-Rada commitment to pets scale. *Anthrozoös*. 9(2/3). 88-94.
- Stallones, L., Johnson, T.P., Garrity, T.F. and Marks M.B. 1990. Quality of attachment to companion animals among U.S. adults 21 to 64 years of age. *Anthrozoös*. 3(3). 171-176.
- Stevenson-Hinde, J. 1991. Temperament and attachment: An eclectic approach. In Bateson, P. *Development and integration of Behaviour*. Cambridge UK: Cambridge University Press. 315-329.
- Stevenson-Hinde, J. 1998. Parenting in different cultures: Time to focus. *Developmental Psychology*. 34(4). 698-700.
- Sussman, M.B. 1985. Pet/human bonding: applications, conceptual and research issues. In Sussman, M.B. (ed). *Pet and Family, Marriage and Family Review*. 8(3/4). 1-4.
- Takeuchi, Y., Houpt, Scarlett, K.A., J.M., and Hart, B.L. 2000. Effectiveness of treatment for canine separation anxiety. *Journal of the American Veterinary Medical Association*. 217. 342-345.
- Takeuchi, Y., Ogata, N., Houpt, K.A. and Scarlett, S.M. 2001. Differences in background and outcome of three behaviour problems of dogs. *Applied Animal Behaviour Science*. 70. 297-308.
- Topal, J. M., Csanyi, V. and Doka, A. 1998. Attachment behaviour in dogs (*Canis Familiaris*): A new application of Ainsworth's (1969) stage situation test. *Journal of Comparative Psychology*. 112. 219-229.
- Tilburg van, T., 1988. *Verkregen en Gewenste Ondersteuning in het Licht van Eenzaamheidservaringen. Received and preferred support in the light of experienced loneliness*. Doctoral dissertation, Nijmegen: University of Nijmegen
- Triebenbacher, S.L. 1998. The relationship between Attachment to companion animals and self-esteem: A developmental perspective. In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.
- Tricket, P. K., and Susman, E.J. 1988. Parental perceptions of child-rearing practices in physically abusive and non-abusive families. *Developmental Psychology*. 24. 270-276.
- Tricket, P. K., and Kuczynski, L. 1986. Children's misbehaviors and parental discipline strategies in abusive and non-abusive families. *Developmental Psychology*. 22. 115-123.
- Tuber, D.S., Sanders, S., Hennessy, M.B. and Miller, J.A. 1996. Behavioral and glucocorticoid responses of adult domestic dogs (*Canis familiaris*) to companionship and social separation. *Journal of Comparative Psychology*. 110.103-108.
- Turner, D.C. 1997. Treating canine and Feline behaviour problems and advising clients. *Applied Animal Behaviour Science*. 52. 199-204.
- Vacalopoulos, A., and Anderson, R.K. 1993. Canine behaviour problems reported by clients in a study of veterinary hospitals. *Applied Animal Behavior Science*. 37. 84.
- Veer, A.J.E. de, 1990. *Parental Disciplinary Strategies and Child's Moral Internalization*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Vidović, V.V., Štetić, V.V. and Bratko, D. 1999. Pet ownership, type of pet and socioemotional development of school children. *Anthrozoös*. 12(4). 211-217.
- Vittersø, B. Kaltenborn, B.P. and Bjerke T. 1998. Attachment to livestock and attitudes toward large carnivores among sheep farmers in Norway. *Anthrozoös*. 11(4). 210-217.
- Voith, V. 1985. Attachment of people to companion animals. *Veterinary Clinics of North America: Small Animal Practice*. 15. 289-295.
- Voith, V. 1993. Anthropomorphism, spoiling, and environmental factors. *Tijdschrift voor Diergeneeskunde*. 118. suppl. 1. 61s-63s.



- Voith, V. L. and Borchelt, P.L. 1985. Separation anxiety in dogs. *Compendium of Continuing Education for the Practicing Veterinarian*. 7. 42-53.
- Voith, V. L., Wright, J. C. and Daneman, P. J. 1992. Is there a relationship between canine behaviour problems and spoiling activities, anthropomorphism and obedience training? *Applied Animal Behaviour Science*. 34. 263–272.
- Voith, V.L., McGrave, E.A., Marder, A.R. and Lung, N. 1997. Environmental and behavioural profiles of dogs with separation anxiety. In Mills, D.S., Heath, S.E. and Harrington, L.J. (eds). *Proceedings of the First International Conference on Veterinary Behavioural Medicine*. Birmingham UK: Universities Federation for Animal Welfare. 241.
- Voith, V., and Borchelt, P. 1998. Managing fear in dogs. *Veterinary Technician*. 19(7). 462-468.
- Weiss, R.S. 1991. The attachment bond in childhood and adulthood. In Parkes, C.M. Stevenson-Hinde, J. and Marris, P. (eds). *Attachment Across the Life Cycle*. New York: Tavistok/Routledge. 66-76.
- Wells, D.L. and Hepper, P.G. 1999. Male and female dogs respond differently to men and women. *Applied Animal Behaviour Science*. 61(4). 341-349.
- Wells, D.L. and Hepper, P.G. 2000. Prevalence of behaviour problems reported by owners of dogs purchased from an animal shelter. *Applied Animal Behaviour Science*. 69. 55-65.
- Wright, J.C. and Nesselrote, M.C. 1987. Classification of behaviour problems in dogs: distributions of age, breed, sex, and reproductive status. *Applied Animal Behaviour Science*. 19. 169-178.
- Zasloff, R.L. 1996. Measuring attachment to companion animals: a dog is not a cat is not a bird. *Applied Animal Behaviour Science*. 47. 43-48.



## Chapter 2.

# The perception of problematic behavior in dogs: application of multidimensional scaling and hierarchical cluster analysis

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### Abstract

*Various studies show that up to 40% of the dogs are labeled as having behavioral problems causing at least some inconvenience. The present paper deals with the owner's perception of inappropriate dog behavior and the characteristics of the situations in which this behavior occurs. To achieve a systematic description of problem situations with dogs the following questions were addressed: 1. What daily situations do the dog owners consider being problematic? 2. What meaning do owners give to these problematic situations?*

*Thirty-five dog owners were asked to describe situations in which their dog engaged, and to indicate of these they perceived as problematic and annoying. This resulted in 114 unique situations which were classified into the following main categories: aggressive behavior, disobedient behaviors, and reactive behavior. The meanings that owners gave to the problem situations were studied. One hundred and two owners were asked to sort 39 situations according to similarity (Q-sorting). The data were analyzed by using multidimensional scaling and hierarchical cluster analysis. The multidimensional analysis resulted in three dimensions. These indicated that the situations which are perceived as problematic are related to six categories: disobedient behavior, aversive behavior, aggressive behavior, fearful behavior, uncontrolled (excited) behavior, and mating behavior. The hierarchical cluster analysis resulted in eight Clusters: A - The fearful dog, B - The aggressive/dominant dog, C - The 'mating' dog, D - The emotional dog, E - The bored/lonely dog, F - Eating habits of the dog, G - The unruly dog, H - The disobedient dog.*

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**Key Words:** *behavioral problems, companion animals, dogs, perception*

## Introduction

Dogs (and cats) are the only species that are regularly subjected to the same kind of human treatment from the day of birth as human infants (Hart and Hart 1985). The compatibility of the social systems of man and these species has facilitated the formation of this unique interspecific relationship. The behavior of the companion animal is an important determinant of the success of this relationship, as problematic behavior of the pet can often interfere with the development of a satisfactory relationship between the pet and its owner. Some of the most common behavior problems that people experience with their pets originate from the relationship that has developed. In most cases, pet and owner demonstrate normal species-typical behaviors that sometimes are unacceptable to the other species. Behavior problems in pets may be manifestations of normal and adaptive activity or of abnormal activity: the distinction most often lies in the owner's point of view (Voith 1983; Houpt 1983; Hart and Hart 1985, 1988; Marder and Marder 1985; Fogle 1990; Reisner 1991; Hart 1991; O'Farrell 1986, 1994). For example, dogs relating to their owners as conspecific pack members and to their homes as their territories may be unable to limit their protective aggression to people whom their owners consider undesirable.

On average, pet owners not only regard their pet as a part of the family (Cain 1983, 1985; Smith 1983; Voith 1983; Soares 1985; Sussman 1985; Albert and Bulcroft 1987) or even as their own child (Mallon, 1993) but they also talk of the love, affection, and fidelity their pet has towards them (Serpell, 1986). In short, the average pet owner thinks of his pet in human terms. Studies by Katcher et al. (1983) and Cain (1985), showed that as many as 75% of pet owners define their pet as a person or as having a 'person status'. In this role as a person, the animal is talked to and confided in. Beck and Katcher (1983) found that 80% of the veterinary clients they studied talked to their pets in the same way they talked to people. This activity is defined as an authentic conversational exchange in that owners believe that their animals understand what they say, are sensitive to their moods and feelings, and moreover, the animals also respond appropriately (Beck and Katcher 1983; Cain 1985; Serpell 1986).

The ways in which parents interact with their children and attempt to exercise control over them varies greatly. The assumption is that parents do not solely act on a stimulus (specific act) provided by their child in the immediate situation. The interaction between parents and children is also based on previous experience with the child, knowledge of his/her character, the parents' interpretation of the social situation, and the goal the parents try to achieve (Goodnow 1984, 1988; Miller 1988; Decović 1991). When owners interact with their dog, one can speculate that

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they might use 'human' criteria for problematic behavior as well as 'human' rearing and disciplining methods with their pets, particularly if dogs are involved (Fogle 1990; Neville 1991; O'Farrell 1992, 1994).

### **Perceived behavioral problems of dogs**

In surveys of dog owners were asked with which behavioral problems they were generally confronted. Voith et al. (1992) reported that 40% of the interviewed dog owners indicated that their dog engaged in behaviors that they considered problematic (single as well as multiple behavior problems). The problematic behaviors reported were aggression, house soiling, vocalization, destruction, disobedience, fearful behavior, digging, and chewing. Mugford (1981, 1984); Houpt (1983); Borchelt and Voith (1985); Campbell (1986 a,b); O'Farrell (1986, 1992); Crowell-Davis (1991); Hunthausen (1991); Landsberg (1991) and Jagoe and Serpell (1996) also reported similar incidents of behavioral problems causing at least 'some inconvenience' to the owner. These studies show that more than 50% of behavioral complaints were connected to different aspects of aggression (aggression towards owners, aggression towards strangers, and aggression towards other dogs). Horwitz (1996) and Sherman et al. (1996) report that aggression between dogs (social aggression) occurs mainly in two contexts: dominance-motivated conflicts and territorial defense. Dominance-motivated aggression is prevalent also against the owner or other strange humans (O'Farrell 1986, 1992; Jagoe and Serpell 1996). Wright and Nesselrode (1987) and Landsberg (1991) found that aggression, reactivity, and separation-related behavior can account for about 90% of behavioral problems, and in many cases dogs exhibit multiple behavior problems. The perceptions of inappropriate behavior and the situations in which it occurs are relevant components in this study. Because information about what is considered as problematic behavior in dogs comes mostly from Anglo-American studies, we decided to examine whether this information also applied to dogs and their owners in The Netherlands.

The purpose of the present study was to achieve a systematic description of problematic dog-rearing situations with dogs: situations which are experienced by dog owners as more or less problematic. In addition, we are interested in how the dog owners perceived this problematic behavior. The following questions were addressed:

1. Which daily situations do the dog owners consider to be problematic?
2. How are these situations perceived and interpreted by the owners?

In order to study the relationships between the situational variables and the owners variables as antecedents to the owner's response in problematic dog-rearing situations, it is important to

investigate which characteristics of every day dog-rearing situations the owners consider problematic. To achieve this, the following two steps were carried out: an inventory was collected of the types of problems which owners considered problematic, and the items on the list were subjected to a Q-sorting procedure on the problems that were detected in the inventory (Peters 1985, Gerris et al. 1988).

## **Step 1: Inventory of problematic dog behavior**

### **Subjects**

A snowball sampling technique resulted in a sample of 35 subjects (19 females and 16 males), who ranged in age from 20 to 68 years, with a mean age of 39 ( $SD=12.38$ ). Each subject owned only one dog (and no cats); the dog was at least one year old and had been owned for at least one year. If the ownership was less than one year, the owners were interviewed only if they had long-term experience with dogs.

### **Procedure**

The subjects were briefly interviewed about situations with dogs that they encountered and perceived as problematic. This yielded an inventory of 361 descriptions of problematic situations with dogs. Among the 361 descriptions, some were almost identical. All the doubles and triples were removed. Six other dog owners (not included in the interviewed group) were asked to classify the 361 descriptions into a smaller number of characteristic situations. This resulted in 114 situations, which, subsequently, two persons (out of the group of six) categorized into twelve types of situations. These were further divided into three main categories: 'the aggressive dog', 'the disobedient dog', and 'the reactive dog'. There was also an 'other' category which included situations that did not belong to any of the three categories. Obtaining this type of information and using situation perception data have been described in detail by Peters (1985).

## **Results**

### **Inventory of problematic dog behavior**

About 60% of the situations concerned aggressive and disobedient dog behaviors while about 40% were situations concerned with dogs which reacted in a temperamental or emotional manner. The main categories were named as follows: Aggressive behavior, Disobedient behavior, and Reactive behavior.

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The category 'Aggressive behavior' describes situations in which the behavior of the dog is aggressive, agonistic, and dominant. It deals with situations in a public setting where the dog engages in conflicts with other animals and situations in the home setting where the dog is aggressive or dominant towards his/her owner, towards other visiting animals or strangers or people who do not live in the house.

The category, 'Disobedient behavior' deals with situations in which the dog is obstinate and engages in offensive and annoying behavior and does not obey the owner who tries to correct him.

**Table 1.** Categories of problematic dog-rearing situations (absolute and relative numbers of situations).

Category	Absolute frequencies	Relative frequencies
<b>Aggressive behavior</b>	<b>26</b>	<b>22.8%</b>
1. aggressive and agonistic behavior in public setting with animals	10	8.8% (10,28,9)
2. aggressive and dominant behavior in house setting with humans	13	11.4% (12,1,18,25,30)
3. aggressive behavior in house in public setting with other animals	3	2.6% (15)
<b>Disobedient behavior</b>	<b>39</b>	<b>34.2%</b>
4. disobedient behavior in public setting with humans	9	7.9% (3,39,2)
5. disobedient behavior in house setting with humans	18	15.8% (14,16,6,31,22,21)
6. disobedient behavior in public setting causing owner aggravation	9	7.9% (24,36,19)
7. disobedient behavior in house setting causing owner aggravation	3	2.6% (11,29)
<b>Reactive behavior</b>	<b>46</b>	<b>40.4%</b>
8. apprehensive behavior concerned with other animals	9	7.9% (8,17,27)
9. behavior concerned with 'natural drives'	9	7.9% (20,37,23)
10. distressed behavior in house setting	19	16.7% (5, 26, 35,7,38,13)
11. destructive behavior	6	5.3% (4,33,34)
12. behavior related to noises	3	2.6% (32)
<b>Other</b>	<b>3</b>	<b>2.6%</b>

*Note: The numbers in parentheses refer to the number given to the prototypical situation in the following Q-sort procedure (i.e step two in the text).  $N=114$*

The category, 'Reactive behavior' is extensive and includes several aspects such as the apprehensive dog that is anxious in contact with other animals, or a dog that is anxious when left alone and sometimes engages in destructive behavior. The categories are described in Table 1.

## Step 2: Perception of problematic dog behavior - Sorting procedure

### Materials and Methods

#### Subjects

The sample consisted of 102 adult volunteers (68 females, 34 males) with a mean age of 43 years, ranging from 18 to 78 years ( $SD = 13.74$ ). Subjects were contacted through announcements in local and regional newspapers, university newspapers, and through appeals on local and regional radio stations. For each subject the following characteristics were noted: sex, age, marital status, and number of children. This sample had not taken part in the inventory procedure and were classified according to living situation: 37 with partner and child(ren), 30 with a partner and without children, 28 singles without children, seven singles with children. Seventy-eight subjects lived in or around Nijmegen (a city of 150,000 inhabitants in the Eastern part of the Netherlands), and 24 subjects live outside that region (in the Netherlands).

#### Procedure

For the sorting tasks, Peters (1985) recommends to use between 30 and 40 situations. Based on the classification of the situations into categories (Table 1), we selected a sample of 39 prototypical situations describing problematic behavior of a dog (Appendix A – a concise version). The criterion for the selection was the frequency of occurrence in each main category (Table 1).

Each prototypical situation is a short description and always includes a problematic behavioral aspect. The selected situations have to be familiar and identifiable to as many owners as possible. The following guidelines were applied (Magnusson 1978; Peters 1985): a. the situations had to be described in a short and concrete manner; b. the situations had to be applicable to a wide range of dog breeds; c. the situations had to contain an action by the dog. Obviously, in all the situations the dog engages in activities that are considered problematic by the owners.

Each of the 39 situations was printed on a card (Figure 1). These cards were presented to the subjects for sorting. Subjects were asked to sort them into an arbitrary number of groups (following the procedure in: Peters 1985; Gerris et al. 1988; Siebenheller 1990), the limits being not less than 3 groups and no more than 15 groups (to prevent loss of information: less than three groups provides little information and more than 15 groups contributes little meaningful information). The number of situations in each group was restricted to no more than 20. Other than those restrictions, the way the subjects ordered the situations and the criteria they applied in comparing the situations was left up to them. The subjects were allowed a maximum of 30 minutes to complete the sorting task, which included naming each of the groups. Situations that

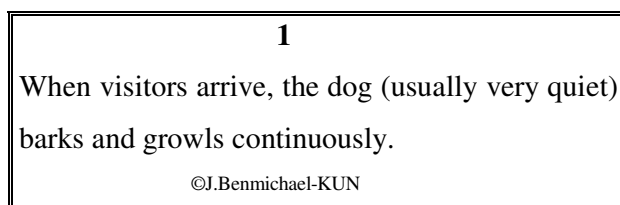


## The perception of problematic behavior in dogs

could not be grouped in any of the categories were sorted into a separate group, the residual group. The subjects were instructed to think in terms of 'a dog ' and not 'my dog' because people found it difficult to classify situations that they had not experienced with their own dog. When they could think about an imaginary dog, they found it easier to complete the sorting task.

The method had been previously tested with a pilot group of 10 dog owners (not in the study group) who were asked to sort the situations and indicate how feasible this task is and whether the descriptions of the situations are identifiable. Adjustments were made according to their comments. The results of the current study showed that the average number of groups formed was nine (ranged between 4 and 18) and each group contained an average of four situations (ranged between 2 and 19).

**Figure 1.** Example of a Problematic Situation Card.



## Analysis of the sorting procedure

The sorting task resulted in a similarity data matrix<sup>1</sup> which expressed the resemblance of the situation in the perception of the subjects. This matrix was analyzed in two ways: multidimensional scaling<sup>2</sup> and hierarchical cluster analysis<sup>3</sup>, (Peters 1985).

## Results

### Results of multidimensional scaling method

Looking at the variables: sex, marital status, number of children and age, we found, by means of Indscal procedure, that the multidimensional configurations for these subgroups proved to be similar to the overall configurations. Therefore, further description of results and discussion will apply to the whole sample.

In the present study we found a three-dimensional solution to be the most adequate way to describe the perceptions of our respondents. The stress value of this solution is 0.157 which is

<sup>1</sup>Matrix available with first author.

<sup>2</sup>The multi-dimensional scaling was performed with ALSCAL (SPSS-X), ordinal analysis according to the euclidian model.

<sup>3</sup>The hierarchical cluster analysis was performed with CLUSTER (SPSS-X), according to the average-link method.

considered as 'fair'<sup>4</sup> (Kruskal, 1964). Appendix A describes the loading of each situation on each dimension. We used only the most positively and the most negatively loaded situations to determine the dimensions. Situations which were most positively and most negatively loaded but common to two or more dimensions were ignored.

The most positively loaded situations on 'Dimension 1' (Table 2) are concerned with emotional situations where anxiety and excitement play a central role. Dogs express their fear in many ways such as flight, fighting, barking anxiously, trembling, urinating, or assuming body postures of fear (Fogel 1990, O'Farrel 1992). Situations 13, 17, 27, and 8 describe a fearful and submissive dog (social fear) while situation 32 describes non-social fear. In the most negatively loaded situations which are specific only to this dimension (6, 2, 14, and 11), disobedience plays a central role. These situations describe disobedient behavior when the dog is disciplined or handled (refuses to obey the owner's command to terminate the activity in which he is engaged).

**Table 2.** The Most Negatively and Positively Loaded Situations on Dimension 1.

Situation	Loading	Concise description
13	2.22	afraid of other dogs, also inside the house
32	2.21	afraid of noises
17	2.17	does not want to play outside with other dogs
27	2.16	avoidance of confrontation with other dogs
8	2.14	avoids approaching other animals, walks besides owner
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.		
6	-1.06	lies on bed although this is forbidden
<b>12</b>	-1.14	sleeps on bed, growls when sent away
<b>1</b>	-1.16	barks at visitors, commanded to stop, growls at owner
2	-1.17	goes over to neighbors, does not come back when called
14	-1.18	steals food
11	-1.25	begs for food
<b>30</b>	-1.40	jumps on furniture; growls when sent away

*Note: The bold numbers indicate situations which are common to two dimensions or more.*

Along 'Dimension 2' the most positively loaded situations are concerned with situations where aggression plays a central role. In this group, situations 10, 28, and 9 (with highest positive loading) are perceived as aggression towards other pets (intraspecies aggression; dominance aggression). Situations 1, 25, 18, and 15 describe aggression towards people or animals in the context of territorial aggression. Situations 1, 12, and 30 are concerned with aggression towards

<sup>4</sup>The extent to which the solution matches the input data expresses the stress. If the stress is 0 then solution is a perfect representation of the input data: the higher the stress becomes, the less perfect is the solution. The qualifications used for stress are as follows: 0.00 - perfect; 0.025 - excellent; 0.05: good; 0.10: fair; 0.20: moderate (Kruskal, 1964).

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the dog's 'own' owner when he tries to handle or discipline the dog (dominance motivated aggression). The most negatively loaded situations which are specific only to this dimension (21, 34, 24, 36, 19, and 4) describe dogs which are engaged in improper behavior. These situations describe various activities in which the dog engages in aversive and offensive activities which include reluctance to obey the owner, destruction, and coprophagia.

**Table 3.** The Most Negatively and Positively Loaded Situations on Dimension 2.

Situation	Loading	Concise description
10	1.96	fighting with other dogs
28	1.84	fighting outside with other animals
9	1.83	fighting with other dogs in house
<b>1</b>	1.53	barks at visitors, when commanded to stop, growls at owner
25	1.35	barks when visitors ring the doorbell
18	1.22	barks and growls at visitors
15	1.19	defends his food tray from a visiting dog; growls and bites
<b>12</b>	1.16	sleeps on bed; growls when sent away
<b>30</b>	0.90	jumps on furniture; growls when sent away
.		
.		
<b>22</b>	-0.83	does not stay in place on command
21	-1.01	licks faces; does not stop on command
<b>29</b>	-1.04	after eating begs for food
34	-1.08	dog destroys things in the house
24	-1.09	unable to defecate and urinate in specific spot only
36	-1.27	eats pica
<b>33</b>	-1.50	hides things in house
19	-1.60	reluctant to urinate and defecate
4	-1.66	moves things in house

*Note: The bold numbers indicate situations which are common to two dimensions or more.*

When we look at the situations along the continuum on 'Dimension 3', we see that the positively loaded situations (20, 37, 23, 35, and 3) are concerned with 'sexual' behavior. In the most negatively loaded situations which are specific only to this dimension (7, 31, 16) the dog engages in various activities in which the dog displays stress-related behavior such as restlessness, excessive attachment to the owner, and may show displacement activities such as chewing and destruction (Fogle 1990, Hunthausen 1991; Jagoe and Serpell 1996). These situations describe the unruly/overexcited dog.

**Table 4.** The Most Negatively and Positively Loaded Situations on Dimension 3.

Situation	Loading	Concise description
20	2.00	excited behavior when a bitch in the neighborhood is in heat
37	1.95	escapes when bitch in neighborhood is in heat
23	1.61	hangs around a house with a bitch is in heat
35	1.25	displays mating behavior on visitors
3	0.95	sniffs people while walking, disobeys command to stay
.		
7	-0.87	barks when owner is away
<b>22</b>	-0.89	does not stay in place on command
<b>30</b>	-0.90	jumps on furniture; growls when sent away
31	-0.91	chews things
<b>12</b>	-0.96	sleeps on bed, growls when sent away
<b>33</b>	-0.99	hides things in house
16	-1.24	steals food (also hides it)
<b>29</b>	-1.36	after eating, begs for food

*Note: The bold numbers indicate situations which are common to two dimensions or more.*

We already mentioned that the respondents were asked to label the groups of situations they formed in the sorting task. These labels, described in the ensuing list, were used as support for the interpretation of the multi-dimensional structure.

acceptable behavior	dominance
aggression	inconsequent owner
annoying	jealousy
anxiety	laziness
boredom	normal behavior
curious	natural behavior/instinct
dangerous/deceptive	nervousness
defense/protection	a self-willed dog
difficult to change	sensitivity/insecurity
disobedience	submission
dog does not know hierarchy	unacceptable behavior

To summarize, when dog owners consider situations in which the dog engages in problematic behavior, they tend to use three perspectives or dimensions to characterize these situations. The distances between the situations in this space reflect the degree to which the dog owners perceive the situations as different. Our study has resulted in three dimensions, interpreted according to the perception of the dog owners:

**Dimension 1:** Fearful/submissive behavior vs. Disobedient behavior.

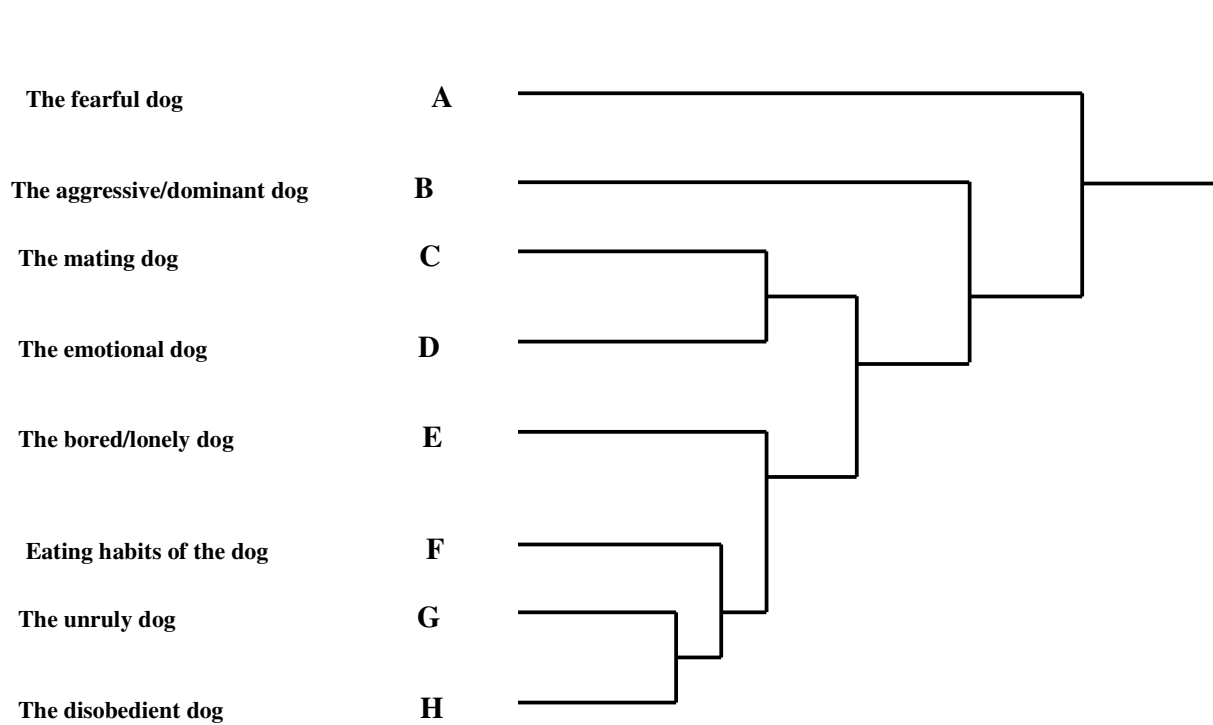
**Dimension 2:** Aggressive behavior vs. Aversive/offensive behavior.

**Dimension 3:** 'Sexual/mating' behavior vs. Overexcited/uncontrolled behavior.

### Results of hierarchical cluster analysis

The second way to look at the results is in terms of hierarchical clusters. The hierarchical cluster analysis that was executed on the data matrix resulted in the structure shown in Figure 2. Figure 3 (I, II, III) show the clusters in details.

**Figure 2.** Classification in clusters of situations describing problematic behavior of dogs.



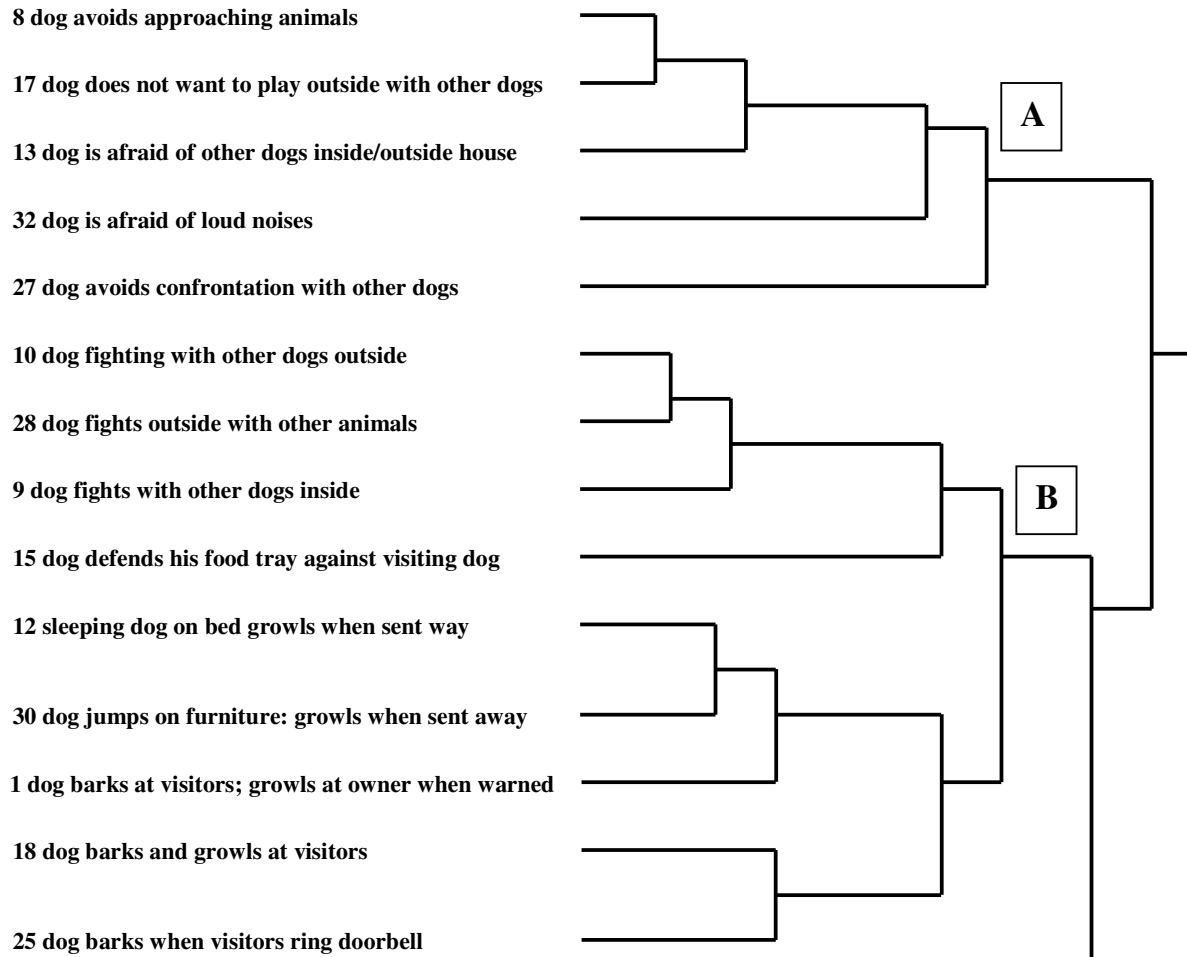
Clusters A and B (Figure 3-I) show situations of dominance and submission. In cluster A (five situations) the dog is submissive, afraid, and it avoids confrontations.

Situations 8, 17, 13 and 27 describe a dog which is submissive, afraid to enter confrontation with other dogs (in home setting and outside) or reluctant to play with other dogs; situation 32 describes a dog which is afraid of loud noises. The relation to anxiety in situations 8, 17, 13, and 27 describes social fear while situation 32 describes non-social fear. Situation 17 describes a dog that is unwilling to play with other dogs, and one may argue that the dog does not necessarily does so because he/she is afraid of conspecifics. Play behavior is a natural inherited activity in pups and adult dogs. Avoiding play can than be induced, for example, by poor socialization, which may cause deviant behavior from aggression to fear of animals, people, and noises.

In cluster B (nine situations) the dog engages in confrontations and shows aggressive behavior towards other animals and humans. In situations 10, 28, the dog fights other animals outside the

house; in situations 9 and 15, the dog fights animals which enter his territory. In all these situations the dog displays dominance and territorial type aggression. Situations 12, 30 and 1 describe dominance-type aggression towards the owners when the dog is handled or disciplined. The dog does not comply with the wishes of the owner, and growls. In situations 18 and 25, the dog is aggressive towards visitors (territorial-type aggression).

**Figure 3-I.** Classification in Clusters (A - B) of Situations Describing Problematic Behavior of Dogs.  
**I - Clusters A and B**



Clusters C, D, and E (Figure 3-II) describe an overexcited and restless dog. In cluster C (3 situations) the dog is motivated by natural drives, a characteristic dog-like behavior.

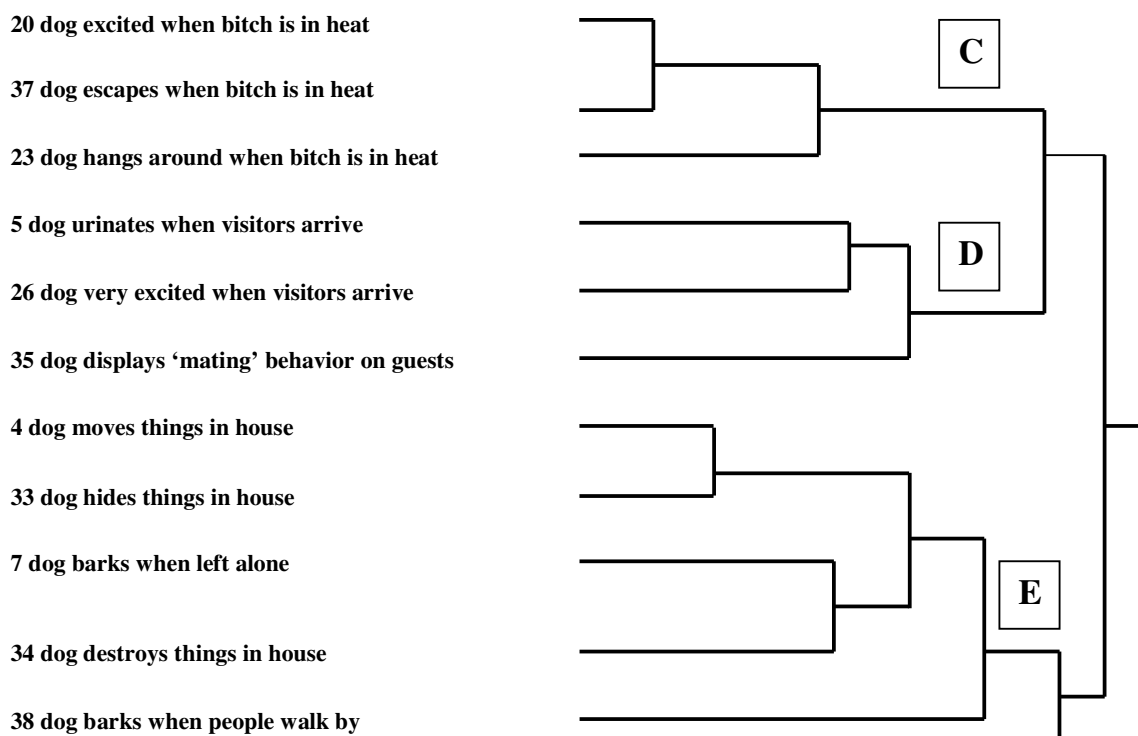
Cluster D includes 3 situations which are concerned with the behavior of the dog when visitors arrive. Situations 5, 26 and 35 involve cases when visitors arrive and trigger a highly emotional reaction. The behavior in situation 35 involves "mating" behavior and is different from situations 5 and 26, in which the dog reacts to visitors by urinating.

## The perception of problematic behavior in dogs

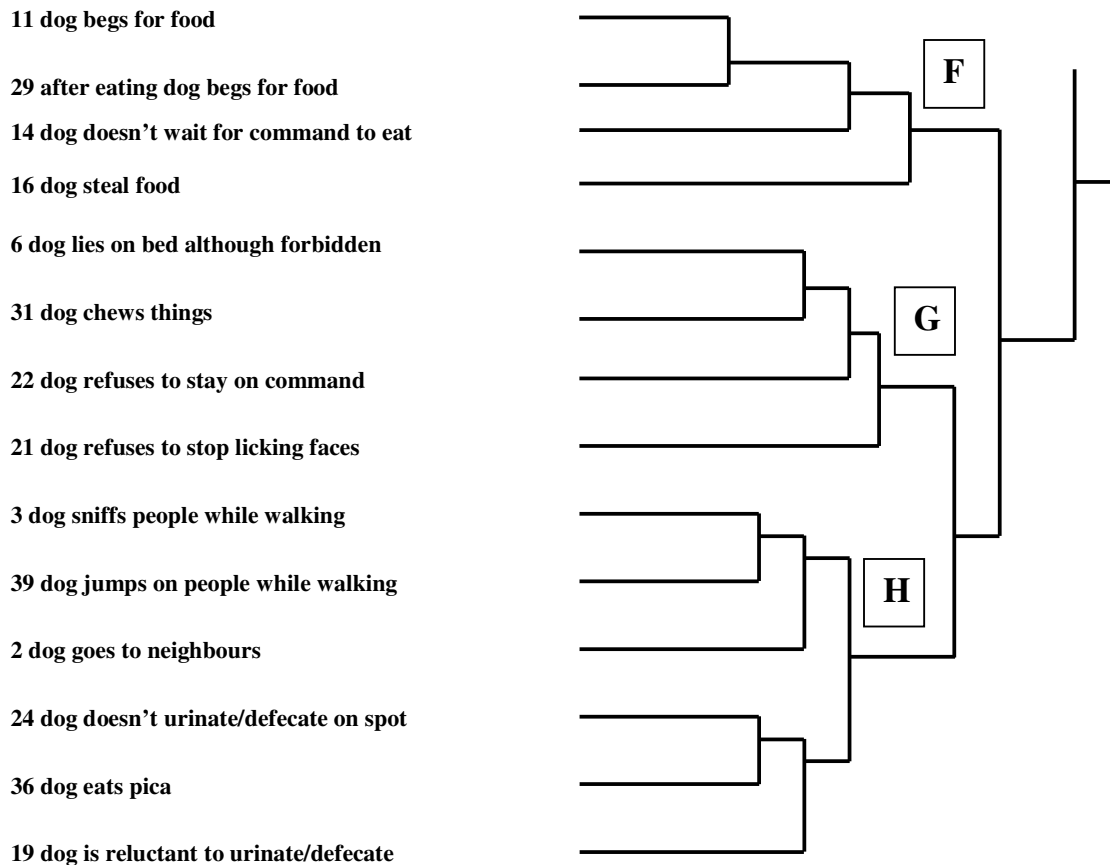
Cluster E contains situations which describe a restless dog. The dog moves and hides things in house (4 and 33), destroys (situation 34), or barks continuously, especially when left alone (7 and 38). This behavior is characteristic of a dog which suffers from separation-related problems or boredom.

Clusters F, G, and H (Figure 3-III) describe the disobedient and noncompliant dog. Cluster F deals with eating situations. The dog begs for food (11 and 29) or steals it (14 and 16). In cluster G the dog refuses to comply with the wishes of the owner, whereas Cluster H contains situations in which the dog bothers people (2, 3 and 39) and engages in offensive or even repulsive behavior (19, 24 and 36).

**Figure 3-II.** Classification in Clusters (C-E) of Situations Describing Problematic Behavior of Dogs.  
**II-Clusters C, D, and E.**



**Figure 3–III.** Classification in Clusters (F-H) of Situations Describing Problematic Behavior of Dogs.  
**III - Clusters F, G, and H.**

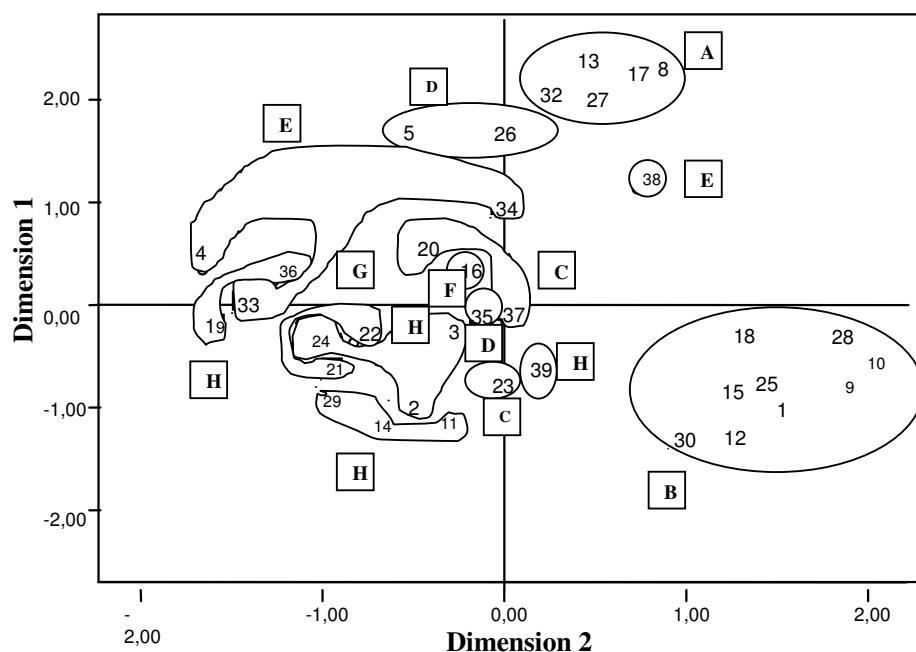


### Combination of multidimensional scaling and hierarchical cluster analysis

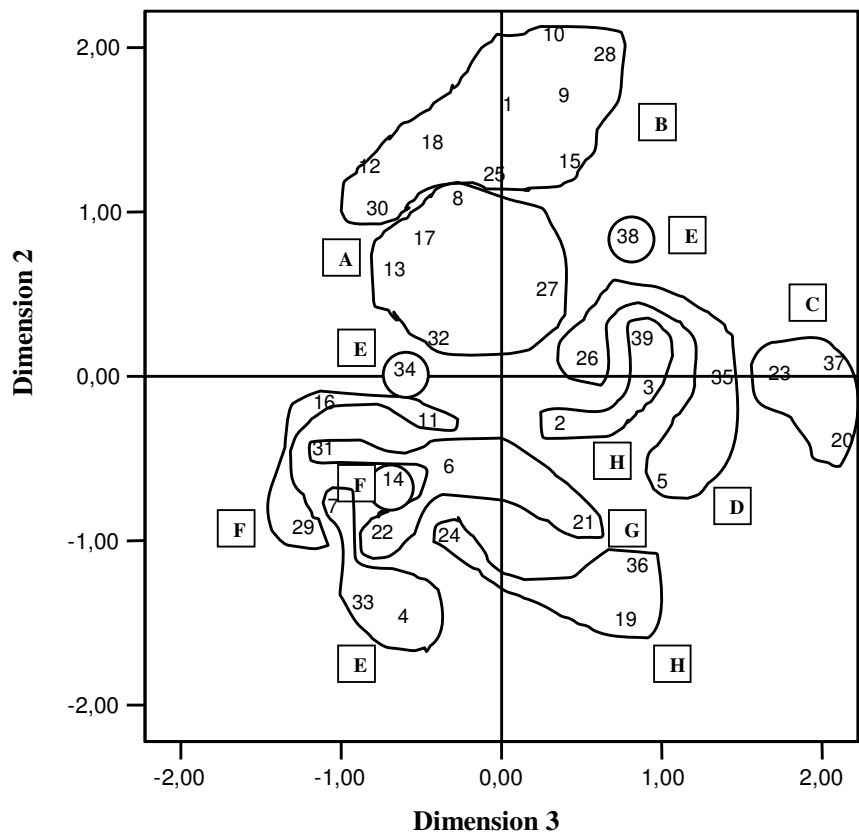
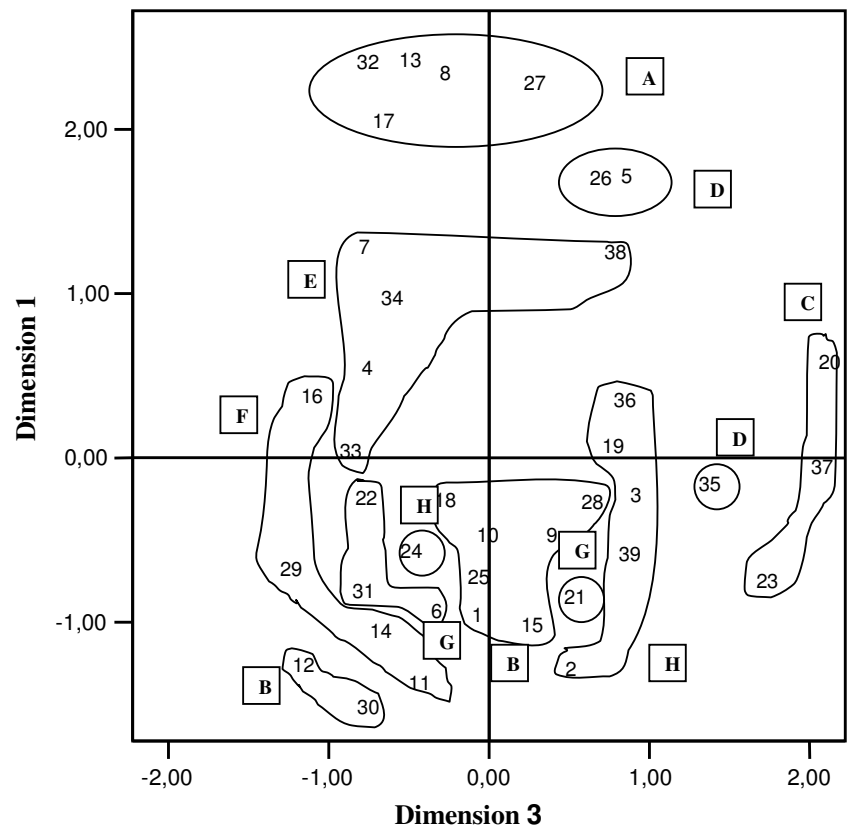
Multidimensional scaling and hierarchical cluster analysis are methods to reconstruct the way respondents organize the situations. These two techniques should lead to comparable results. It is possible to combine the results of the multidimensional scaling and hierarchical cluster analysis by drawing the clusters in the dimensional representation of the multidimensional scaling. Figure 4 shows the combination of the multidimensional scaling and hierarchical cluster analysis, and how the clusters fit in the dimensional representations.



**Figure 4.** The Hierarchical Cluster Structure Illustrated in Two Dimensional Representations of the 39 situations: **Dimension 1 x Dimension 2**; **Dimension 1 x Dimension 3**; **Dimension 2 x Dimension 3**.



In this figure, the three-dimensional structure of the situations is presented in three two-dimensional plots. The situations that belong to a cluster, according to the hierarchical cluster analysis are bound in a defined area. Inspection of these plots shows that most of the clusters can be placed in a specific part of the dimensional structure. Consequently, Cluster A is characterized by a high positive loading on Dimension 1 and a neutral loading on the other dimensions. Cluster B is located at the positive pole of Dimension 2 and at neutral positions on the other dimensions. Cluster C is characterized by positively loaded situations on Dimension 3 and has neutral loadings on Dimension 1 and 2. Cluster D includes neutral loading situations on Dimensions 2 and 3 and is found in discrete locations on Dimension 1. The situations in Cluster E have negative loadings on Dimension 2 and have neutral loading on Dimension 1 and 3. Cluster F is characterized by the most negatively loaded situations on Dimension 3 and by neutrally loaded situations on Dimension 1 and 2. Clusters G and H include situations which have neutral loading on all three dimensions. The results of the multi-dimensional scales analysis and the hierarchical cluster analysis support each other since most clusters have an identifiable position in the dimensional space.



## Discussion

The purpose of this study was to determine the situations in which the dog's behavior is described as problematic and how the problematic behavior of the dog was perceived by the owner.

The results of the inventory of the problematic dog behavior show that owners recognize behavioral problems concerning aggression, disobedience, and problems caused by circumstances and temperament (fear, separation-related behavior, etc.). Almost 60% of the recognized problems pertain to aggression and disobedience while about 40% involve excessive emotional reactions. These results are in agreement with studies of Borchelt and Voith (1982b); Hart and Hart (1985c); Wright and Nesselrode (1987); Landsberg (1991); O'Farrell (1992, 1994); Fogle (1990); Voith et al. (1992).

The Q-sorting procedure produced three dimensions and these are illustrated in Figure 5.

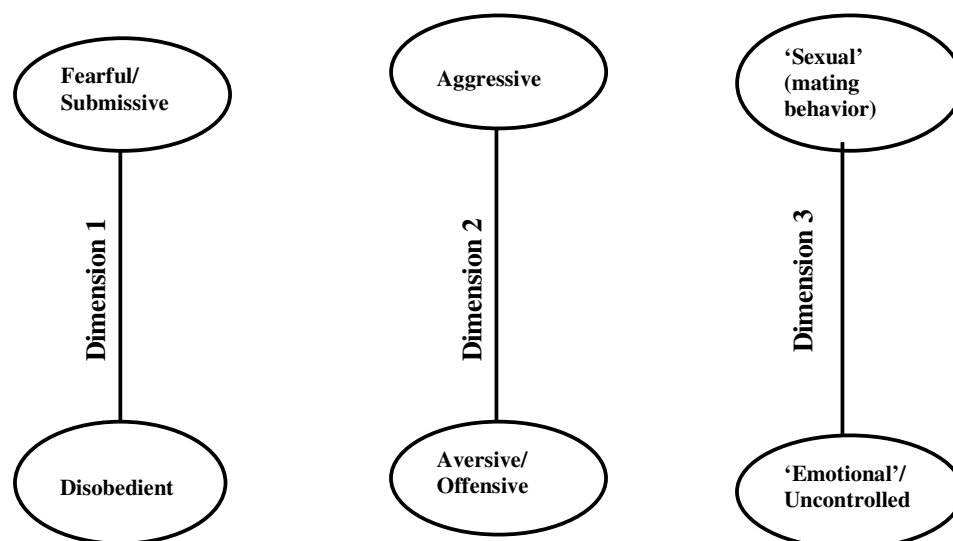
The three dimensions indicate that the problematic situations are related to four major categories: disobedience, aggression, reactivity (uncontrolled, excited behavior), and mating behavior.

**Dimension 1:** Fearful/submissive behavior vs. Disobedient behavior.

**Dimension 2:** Aggressive behavior vs. Aversive/offensive behavior.

**Dimension 3:** "Sexual" behavior vs. 'Emotional'/uncontrolled (exited) behavior.

**Figure 5.** The dog's behavior on the three dimensions as perceived by the owners.



We employed the labels the owners used to describe the groups for the description of the dimensional structure. When the dog displays behavior which is concerned with anxiety and submission (Dimension 1), the owner perceives it as emotional, instinctive, insecure, difficult to change, and annoying. However, they remarked that this type of annoying behavior might be acceptable in those situations in which the behavior of the dog pertains to instinct or stems from the dog's character.

When the dog displays aggressive behavior (Dimension 2), he is considered as rebellious, dangerous, dominant, and vicious. Aggressive behavior displayed in a public setting is perceived as the most annoying. Sanders (1990) suggested that the misbehavior of the dog in a public setting is perceived as a violation of the public order and tends to degrade the social identity of the human owner and to disrupt the interaction with other people. The owner feels that he is held responsible for the action of the dog.

The fact that aggressive behavior is the most common complaint (Knol 1987; Blackshaw 1991; Beaver 1994) may simply reflect that in social species like the dog, aggression makes part of everyday life and therefore owners are most likely to become confronted with it. Also, aggressive behaviors can cause damage, its consequences often are expensive, and the dog owner may even be forced to have his/her pet euthanized.

When the dog displayed copulatory behavior (Dimension 3), the owners described this behavior as nervous, happy, normal for dogs, sexual, and instinctive. Most of the owners find this behavior also acceptable and natural, but, nevertheless, they regard it as annoying, inconvenient, and offensive. These situations are embarrassing for the owner, not because of the dominance aspect (situation 35), but because of the sexual act in public. Dogs seem to upset people by their sexual habits. Courting and mating are obvious actions (which take quite some time), and human beings find it particularly repulsive (O'Farrell 1986, 1992, 1994; Fogle 1990).

In each of the dimensions the other extreme involves different facets of disobedience.

In Dimension 1 the disobedience is associated with 'conventional' rules the owner employs, that is, rules of 'what is allowed and what is not allowed in the household'. In most of those situations, the dog does not comply with the wishes of the owner. These situations are perceived by the owners as acts of defiance, annoying, difficult to change, dominant, dangerous, disobedient, and self-conceited.

In Dimension 2 the owner perceives the disobedient behavior of the dog as being associated more with offensive behavior. The dog is naughty, greedy, dominant, contemptuous, and has nasty habits. Here the problematic behavior of the dog, as some owners mentioned, can be a result of the incompetence of the owner, who cannot exercise enough control over the dog.

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In Dimension 3 the disobedient behavior of the dog can be related to overexcitement. The dog is perceived by the owners as dominant, annoying, not disciplined, nervous, calling for attention, and curious. Some of the owners observed that this behavior could be modified by disciplining the dog.

When evaluating the perception of the situations in which the dog displays problematic behavior, it seems that owners not only consider the circumstances but also the dog's character.

The situation clusters occupy distinct areas in the multidimensional space which consequently, provides additional support to the validity of the three-dimensional solution and contributes valuable insights into the way the respondent looked at the situations during the sorting task.

These findings provide evidence that dog owners are able to differentiate aspects of situations where dogs show problematic behavior. The differentiation is incorporated in the dimensions or clusters underlying parental perceptions. These findings confirm the outcomes of the studies of Siebenheller (1990) and Korzilius (1996) concerning parent perception of child-rearing situations.

## **Limitations of the Study and Future Research**

The present study has to consider several limitations. Firstly, this study concerns situations which are uncomplicated, whereas everyday situations may be more complex for the owners because they consist of more stimuli that must be considered simultaneously.

Secondly, the group of owners represented a convenience sample, and this may bias the results.

Thirdly, the present study did not ask the owners whether they understood what triggers the dog's behavior or whether they understood the motivation and the behavior of the dog. Many studies (Hart and Hart 1985; Fogle 1990; O'Farrell 1992, 1994; McBride 1995; Delta Society Working Group 1995) suggest that understanding the dog, his/her traits and history are very important considerations in the communication between the owner and the dog. When the owner lacks knowledge pertaining to canine social behavior and communication, he/she may perceive the dog's behavior as inappropriate and consequently react (for example, by disciplining) in an inadequate way.

Experimental research with children in problem situations provided evidence for causal relationship between perceptions, emotions, and behavioral reactions of the parents (Siebenheller 1990 and Korzilius 1996). Understanding the innate aspects of a certain behavior may determine the reaction of the owner. Misinterpretation of the dog's behavior possibly caused by miscommunication or misunderstanding may lead to improper disciplining behavior and be

counterproductive. For example, it may contribute to additional behavior problems and affliction. Future research should investigate how owners react when a dog engages in problematic behavior and what antecedents influence the owner's reactions.

## References

- Albert, A. and Bulcroft, K. 1987. Pets and their urban life. *Anthrozoös* 1(1). 9-23.
- Beaver, B.V. 1994. Owner complaints about canine behaviour. *Journal of the American Veterinary Association*. 204(12). 1953-1955.
- Beck, A. and Katcher, A.H. 1983. *Between Pets and People: The Importance of Animal Companionship*. New York: G.P. Putna's Sons.
- Blackshaw, J.K. 1991. An overview of types of aggressive behaviour in dogs and methods of treatment. *Applied Animal Behaviour Science*. 30.351-361.
- Borchelt, P.P. and Voith, V.L. 1982. Classification of animal behaviour problems. *The Veterinary Clinics of North America: Small Animal Practice*. 12. 571-585.
- Cain, A.O. 1983. Pets as family members. In Katcher A.H. and Beck A.M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 72-81.
- Cain, A.O. 1985. Pets as family members. In Sussman, M.B. (ed). *Pet and family, Marriage and Family Review*. 8(3/4). 2-10.
- Cambell, W.E. 1986a. The prevalence of behavioral problems in American dogs. *Modern Veterinary Practice*. Jan. 28-31.
- Cambell, W.E. 1986b. Effects of training, feeding, regiments, isolation and physical environment on canine behaviour. *Modern Veterinary Practice*. March 239-241.
- Crowell-Davis, S.L. 1991. Identifying and correcting human-directed dominance aggression of dogs. *Veterinary Medicine*. 88. 990-998.
- Deković, M. 1991. *The Role of Parents in the Development of Child's Peer Acceptance*. Doctoral dissertation Nijmegen: University of Nijmegen.
- Delta Society Working Group. 1995. *Learning in Dogs: The Principles of Canine Behaviour and Learning Implications for Learning*. Renton: Delta Society Working Group.
- Endler, N.S. and Magnusson, D. 1976. Personality and person by situation interactions. In Endler, N.S. and Magnusson, D. (eds). *Interactional Psychology and Personality*. Washington DC: Hemisphere.
- Fogle, B. 1990. *The Dog's Mind*. London: Pelham Books.
- Gerris, J.R.M., Vermulst, A.A. and Franken, W.M.F. 1988. Een interactionistisch georiënteerde interviewmethode. Een inventarisering van opvoedingssituaties die ouders als problematisch ervaren. (Interactionistic oriented interviewing: An inventory of problematic child-rearing situations) In Schoorl, R.M., Wijnnekus M.C and de Vries, A.K. (eds). *Gezinsonderzoek. Methoden in de Gezinsdiagnostiek*. Nijmegen: Dekker en Van de Vegt. 75-110.
- Goodnow, J.J. 1984. Parent's ideas about parenting and development: A review of issues and recent work. In Lamb, M.E. Brown, A.L. and Rogoff, B. (eds). *Advances in Developmental Psychology*. Hillsdale NJ: Erlbaum. 3. 193-242.
- Goodnow, J.J. 1988. Parent's ideas, actions, and feelings: Models and methods from developmental and social psychology. *Child Psychology*. 59. 286-320.
- Hart, B.L. 1991. The behavior of sick animals. *The Veterinary Clinics of North America: Small Animal Practice*. 21(2). 225-238.
- Hart, B.L. and Hart, L.A. 1985. *Canine and Feline Behavioral Therapy*. Philadelphia: Lea and Febiger.
- Hart, B.L. and Hart, L.A. 1988. *The Perfect Puppy*. New York: W.H. Freeman and company.
- Horwitz, D. 1996. Canine Social Aggression. *Canine Practice*. 21(4). 5-8.
- Houpt, K.A. 1983. Disruption of the human-companion animal bond: aggressive behaviour in dogs. In Katcher, A.H. and Beck, A.M. (eds). *New Perspectives On Our Lives With Companion Animals*. Philadelphia: University of Pennsylvania Press.

- Hunthausen, W.L. 1991. The causes, treatment, and prevention of canine destructive chewing. *Veterinary Medicine*. 88. 1007-1010.
- Jagoe, A. and Serpell, J. 1996. Owner characteristics and interactions and the prevalence of canine behaviour problems. *Applied Animal Behaviour Science*. 47. 31-42.
- Katcher, A.H. 1983. Man and his living environment: an excursion into cyclical time. In Katcher, A.H. and Beck, A.M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 519-531.
- Knol, B.W. 1987. Behavioural problems in dogs: Problems, diagnoses, therapeutic measures, and results in 133 patients. *Veterinary Quarterly*. 9. 226-234.
- Korzilius, H.P.L.M. 1996. *Mental Representations of Parenting. Structures of Perceptions, Cognitions, and Behavioral Reactions in Child-Rearing Situations*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Kruskal, J.B. 1964. Multidimensional scaling by optimizing goodness of fit to a nonmetric hypothesis. *Psychometrika*. 2. 1-27.
- Landsberg, G.M. 1991. The distribution of canine behaviour cases at three behaviour referral practices. *Veterinary Medicine*. 88. 1011-1018.
- Magnusson, D. 1978. On the psychological situation. *Reports from the Department of Psychology*. University of Stockholm no. 544.
- Mallon, G.P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös*. 6(1). 43-47.
- Marder, A.R. and Marder, L.R. 1985. Human-companion animal relationship and animal behaviour problems. *The Veterinary Clinics of North America: Small Animal Practice*. 15. 411-421.
- McBride, A. 1995. The human -dog relationship. In Robinson, I. (ed). *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford: Pergamon Press. 99-112.
- Miller, S.A. 1988. Parent's belief about children's cognitive development. *Child Development*. 59. 259-285.
- Mugford, R.A. 1981. Problem dogs and problem owners. In Fogle, B. (ed). *Interrelations between People and Pets*. Springfield, IL: Charles C. Thomas. 295-317.
- Mugford, R.A. 1984. Behaviour problems in the dog. In Anderso, R.S. (ed). *Nutrition and Behaviour in Dogs and Cats*. Oxford: Pergamon Press. 207-215.
- Neville, P. 1991. *Do Dogs Need Shrinks*. London: Sidgwick and Jackson.
- O'Farrell, V. 1986. *Manual of Canine Behaviour*. Gloucester: British Small Animal Veterinary Association.
- O'Farrell, V. 1992. *Problem dog - Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.
- Peters, V.A.M. 1985. *Docenten en hun Probleemsituaties. (Teachers and Problematic Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Reisner, I. 1991. The pathophysiologic basis of behaviour problems. *The Veterinary Clinics of North America: Small Animal Practice*. 21(2). 207-224.
- Sanders, C.R. 1990. Excusing tactics: Social responses to the public misbehaviour of companion animals. *Anthrozoös*. 4(2). 82-90.
- Serpell, J. 1986. *In the Company of Animals. A Study of Human-Animal Relationship*. Oxford: Basil Blackwell. 110-116.
- Siebenheller, F.A. 1990. *Problematische Opvoedingssituaties: Percepties, Emoties en Disciplineringsreacties van Ouders. (Problematic Child-Rearing Situations: Subjective Perceptions, Affective Reactions and Behaviors of Parents)*. Doctoral dissertation, Nijmegen: University of Nijmegen.



## The perception of problematic behavior in dogs

- Sherman, C.K., Reisner, I.R., Taliaferro, L.A. and Houpt, K.A. 1996. Characteristics, treatment, and outcome of 99 cases of aggression between dogs. *Applied Animal Behaviour Science*. 47. 91-108.
- Smith, S. 1983. Interactions between pet dog and family members; an ethological study. In Katcher, A.H. and Beck, A.M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 27-36.
- Soares, C.J. 1985. The companion animal in the context of the family system. In Sussman, M.B. (ed). *Pet and Family, Marriage and Family Review*. 8(3/4). 49-62.
- Sussman, M.B. 1985. Pet/human bonding: applications, conceptual and research issues. In Sussman M.B (ed). *Pet and Family, Marriage and Family Review*. 8(3/4). 1-4.
- Voith, V.L. 1983 Animal behaviour problems: an overview. In Katcher, A.H. and Beck, A.M. (eds). *New Perspectives on Our Lives with Companion Animals*. 181-186. Philadelphia: University of Pennsylvania Press.
- Voith, V.L. and Borchelt, P.L. 1982 Diagnosis and treatment of dominance aggression in dogs. *The Veterinary Clinics of North America: Small Animal Practice*. 12. 655-663.
- Voith, V.L., Wright, J.C. and Danneman, P.J. 1992. Is there a relationship between canine behaviour problems and spoiling activities, anthropomorphism, and obedience training? *Applied Animal Behaviour Science*. 34. 63-272.
- Wright, J.C. and Nesselrote, M.C. 1987. Classification of behaviour problems in dogs: distributions of age, breed, sex, and reproductive status. *Applied Animal Behaviour Science*. 19. 169-178.

## Appendix A

Loading of the problem situations on the three dimensions and the descriptions of the problem situations.

SIT	Loading			Concise descriptions of problem situations
	Dim 1	Dim 2	Dim 3	
1	<b>-1.16</b>	<b>1.53</b>	-0.06	barks at visitors, when commanded to stop, growls at owner
2	<b>-1.17</b>	-0.49	0.40	goes over to neighbors, does not come back when called
3	-0.43	-0.27	<b>0.95</b>	sniffs people while walking, disobeys command to stop
4	0.34	<b>-1.66</b>	-0.72	moves things in house
5	1.51	-0.52	0.89	urinates when visitors arrive
6	<b>-1.06</b>	-0.67	-0.42	lies on bed although this is forbidden
7	1.16	-0.67	<b>-0.87</b>	barks when owner is away
8	<b>2.14</b>	0.88	-0.24	avoids approaching other animals, walks besides owner
9	-0.67	<b>1.83</b>	0.28	fights with other dogs in house
10	-0.60	<b>1.96</b>	0.19	fights with other dogs outside
11	<b>-1.25</b>	-0.39	-0.59	begs for food
12	<b>-1.14</b>	<b>1.16</b>	<b>-0.96</b>	sleeps on bed, growls when sent away
13	<b>2.22</b>	0.45	-0.47	is afraid of other dogs, also inside the house
14	<b>-1.18</b>	-0.75	-0.81	does not wait for command to eat
15	-0.90	<b>1.19</b>	0.29	defends his food tray from a visiting dog, growls and bites
16	0.25	-0.28	<b>-1.24</b>	steals food (also hides it)
17	<b>2.17</b>	0.64	-0.46	does not want to play outside with other dogs
18	-0.38	<b>1.22</b>	-0.41	barks and growls at visitors
19	-0.05	<b>-1.60</b>	0.64	reluctant to urinate and defecate
20	0.46	-0.51	<b>2.00</b>	excited behavior when a bitch in neighborhood is in heat
21	-0.73	<b>-1.01</b>	0.39	licks faces, does not stop on command
22	-0.37	<b>-0.83</b>	<b>-0.89</b>	does not stay in place on command
23	-0.87	-0.10	<b>1.61</b>	hangs around a house with a bitch which is in heat
24	-0.45	<b>-1.09</b>	-0.45	unable to urinate and defecate in one spot only
25	-0.89	<b>1.35</b>	-0.19	barks when visitors ring the doorbell
26	1.58	-0.09	0.57	excitement with visitors, urinates
27	<b>2.16</b>	0.41	0.16	avoidance of confrontation with other dogs
28	-0.39	<b>1.84</b>	0.52	fighting outside with other animals
29	-0.80	<b>-1.04</b>	<b>-1.36</b>	after eating, begs for food
30	<b>-1.40</b>	<b>0.90</b>	<b>-0.90</b>	jumps on furniture; growls when sent away
31	-0.93	-0.64	<b>-0.91</b>	chews things
32	<b>2.21</b>	0.35	-0.54	is afraid of loud noises
33	-0.08	<b>-1.50</b>	<b>-0.99</b>	hides things in house
34	0.85	<b>-1.08</b>	-0.73	destroys things in house
35	-0.28	-0.13	<b>1.25</b>	displays mating behavior on visitors
36	0.23	<b>-1.27</b>	0.72	eats pica
37	-0.18	-0.04	<b>1.95</b>	escapes when bitch in neighborhood is in heat
38	1.13	0.73	0.66	barks when people walk past the house
39	-0.71	0.11	0.75	jumps on people while walking outside

*Note: The bold numbers are the most positively and negatively loaded situation in each dimension.*

### Chapter 3.

## Disciplining behavior of dog owners in problematic situations: The factorial structure

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### Abstract

*The purpose of the current study was to investigate the magnitude and structure of situation-specific owner emotions and behavioral reactions in problematic situations involving a dog. The following questions were addressed: 1. What is the magnitude of the situation-specific owner emotions and reactions in a group of dog-owners? and 2. What is the structure of the situation-specific owner emotions and reactions in a group of dog-owners? In addition, the present study considered the question whether the scores of the situation-specific dog-owner emotions and behavioral reactions differ for male and female owners.*

*Fifty-five dog owners were presented with 16 descriptions of prototypical situations with a dog and were asked to record the degree to which they elicited 13 emotions (such as irritation, anger, sorrow, anxiety). They were further asked which disciplinary reactions, such as punishment, demanding compliance, they would use in each situation.*

*Factor analysis of the emotions and behavioral reactions resulted in three emotional factors: anger/irritation, compassion/anxiety and compunction and in two behavioral factors: power assertion and encouraging behavior. Though the most would modify behavior using power assertion, about 10% of the dog owners chose not to enforce compliance of the rules but would prevent further problems by encouragement. Investigation of the male and female owners resulted in slightly different scores, especially for the group of the male owners.*

*These results were related to the literature concerning child discipline in problematic situations.*

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**Key Words:** dogs, behavior problems of dogs, disciplinary behavior, dog owners.

### Introduction

One of the most significant facets of the dog-owner relationship is the owner's daily disciplinary behavior, particularly during problematic situations. When dog owners perceive a situation as a problem, or when they perceive the dog's behavior as inappropriate, they are prone to modify it (Turner 1997; Askew 1996; O'Farrell 1995, 1997; Overall 1997). Voith, Wright and Daneman (1992); Askew (1996) and Overall (1997) suggested that in order to understand why a dog's behavior has become a problem for the owner, one has to assess the environmental context in which the behavior occurs. Overall (1997), stressed the importance of contextual information, claiming it to be the best determinant of whether a behavior is abnormal or normal (i.e., is the behavior contextually appropriate).

Behavioral problems can include behaviors that are context inappropriate (such as stereotypic behavior) and normal species-specific behaviors which are unacceptable to the owner (e.g., aggression and stress induced behaviors). The prevalence of behavior problems is often associated with genetic and physiological disorders of the dog and environmental deficiencies (e.g., stress, and exposure to aversive stimuli). Furthermore, the owner's previous experience with dogs, a lack of training for the dog and unintentional reinforcement (i.e. rewarding demands) can also promote behavioral problems. (Voith, Wright and Daneman 1992; Askew 1996; Jagoe and Serpell 1996; O'Farrell 1997 and Overall 1997). The dependency of the dog on the human partner, combined with the notion that the dog is a part of the family and is frequently expected to act as such, can cause the owner to treat the dog as though it were human (Fogle 1990; Neville 1991; Mallon 1993; Askew 1996). Askew (1996) argued that a modified parental behavioral system primarily determines the nature of the pet-owner relationship. In reacting to the dog's behavior, owners rely on their acquaintance with the parental *behavioral systems* and react similarly towards a dog as they might towards a child (Fogle 1990; O'Farrell 1992; Askew 1996).

Based on the parent-child interaction theories (Magnusson 1988; Gerris 1990), this study describes the interaction of dog and owner in terms of personality (i.e. emotional factors) and situation characteristics (i.e. perception of the situation). Siebenheller (1990) and Korzilius (1996) established that both of these characteristics affect the behavioral reactions of parents in a problematic situation. The perception of problematic situations with children can affect the reported cognitions and emotions of the parents, and, ultimately, their disciplining behavior.

In a previous study Ben-Michael et al. (1997) described the owner's perceptions in situations that involved dog misbehavior. In that study, using a Q-sort procedure (Peters 1985), dog owners were asked to describe situations their dog engaged in and to indicate which of these they perceived as problematic and annoying. The results indicated that the situations which were perceived as problematic could be put into six categories (by means of multidimensional scaling): *disobedient behavior, aversive behavior, aggressive behavior, fearful behavior, uncontrolled (excited) behavior and mating behavior*. Alternatively, they could also be categorized into eight clusters (by means of hierarchical cluster analysis): *fearful, aggressive/dominant, mating, emotional, bored/lonely, eating habits, unruly, and disobedient*. The purpose of the current study was to investigate the magnitude and structure of situation-specific emotional and behavioral reactions by owners to problematic situations involving dogs. Various studies suggested that demographic factors, such as the sex of the respondent, are relevant in our interaction with dogs (Albert and Bulcroft 1987; Mallon 1993; Serpell 1998). The differences in the scores of the emotional and behavioral reactions by male and female dog owners will therefore also be explored in this study.

## Material and methods

### Participants

The original sample consisted of 116 self-selected dog owners who voluntarily agreed to complete a questionnaire about their relationship with their dog. The participants were contacted through requests in local and regional newspapers, university newspapers, and through appeals on local and regional radio stations. Eighty-three persons completed and returned the questionnaire. Because, for the present study, we wanted to examine specific interactional influences of the dog owner in problematic situations, it was important to conduct a separate investigation of which perceptions, emotions and behaviors were involved in any given situation. Fifty-five participants agreed to participate in that investigation.

The selected group contained 75% (n=41) females and 25% (n=14) males, with an average age of 46.7 years ( $SD=12.11$ ). The dogs owned (n=55) were purebred as well as mixed breeds and their mean age was 6.8 years ( $SD=3.38$ ). From the total group of dogs, 40% were male and 60% were female; more than half (54.5%) were still intact. Approximately 75% of the dogs had been owned for more than three years, while the rest had been owned for between one and two years.

### **Procedure**

A group of eight-dog owners (other than the participants of this study; four females and four males) chose the most two representative problematic situations from each of the eight clusters mentioned earlier (Ben-Michael et al. 1997) (total = 16 situations). Each situation was described in brief and always included a problematic behavioral aspect. The selected situations were chosen to be familiar and identifiable to as many owners as possible. Subsequently, 55 owners were asked to consider each of these 16 situations (Table 1) even if they had not experienced it personally, and to:

1. Indicate the degree to which they experienced 13 emotions (disappointment, anger, annoyance, concern, irritation, compassion, powerlessness, anxiety, sadness, pity, acceptance, remorse, and shame) on a 4-point scale (none, not so much, much, very much)
2. Choose one to three applicable reactions from nine behavioral reactions offered (punish, address severely, demand compliance, be inactive, comfort, assist, distract, ignore, reward). These reactions were based on information that was collected previously from dog owners (other than the participants of this study) and from literature about the treatment of behavior problems in dogs (Voith 1983; Fogle 1990; O'Farrell 1992, 1994; Overall 1997).
3. Indicate whether the situation occurred (never, rarely, sometimes, frequently, very frequently) and,
4. Indicate the extent to which the situation was experienced as problematic (not at all problematic, not so problematic, problematic, very problematic).

### **Analysis**

The owner in each situation is the basic unit of analysis in the present study. Consequently, the maximum sample size is  $55 \times 16$  situations = 880 units. As the owner could indicate maximum three behavioral reactions in each situation, the maximum number of possible reactions is 2640 (55 owners  $\times$  16 situations  $\times$  3 reactions). Such an approach includes the considerations of specific interactional influences of the dog owner in the situation. The owner is assumed to apply, in any given situation, a combination of characteristic subjective meanings containing perceptions and emotions.

A factorial structure was established by means of factor analysis of the 13 emotions and nine reactions followed by a varimax rotation and oblimin rotation (Kim and Mueller 1978). One-way analysis of variance was performed to determine whether there were overall differences among the male and female groups of owners. If differences among the subgroups were

found, then a post-hoc test (Bonferonni) was carried out to determine which groups of owners differed from one another. In this paper, just the overall test results of ANOVA are outlined in the text (Ferguson and Takane 1989). Differences in the scores of the emotions and reactions for the variable 'sex' were analyzed by means of t-tests (Ferguson and Takane 1989).

**Table 1.** - Brief descriptions of the 16 situations outlined to the dog owners (detailed description are in Ben-Michael et al. 1997).

Situation	Label	Description
1	The fearful dog	Dog avoids confrontation with other dogs
2	The aggressive/dominant dog	Dog barks when visitors ring the doorbell
3	The 'mating' dog	Dog is excited when a bitch in neighborhood is in heat
4	The emotional dog	Dog is excited with visitors, urinates
5	The bored/lonely dog	Dog barks when the owner is away
6	Eating habits of the dog	Dog begs for food
7	The unruly dog	Dog lies on bed although this is forbidden
8	The disobedient dog	Dog jumps on people while walking outside
9	The fearful dog	Dog is afraid of loud noises
10	The aggressive/dominant dog	Dog fights outside with other animal
11	The 'mating' dog	Dog hangs around a house with a bitch which is in heat
12	The emotional dog	Dog displays mating behavior on visitors
13	The bored/lonely dog	Dog destroys things in house
14	Eating habits of the dog	Dog steals food
15	The unruly dog	Dog chews things
16	The disobedient dog	Dog does not come back when called

## Results

### Emotional reactions of dog owners

#### Magnitude of the emotions

The means scores for the 13 emotions in the 16 situations are given in Table 2. The mean intensity of all emotions in all situations is 1.6 ( $SD=0.51$ ). Fairly intense emotions ( $M= 2.5$ ) were experienced by 7.6% of the owners. The feelings of anger, irritation, disappointment, concern, powerlessness, and shame were important in problematic situations. The most intense feelings were of anger and irritation.

For each situation there is a variation in the degree to which the situation elicited emotions. Some situations evoked mild emotions, such as situation 1 (dog avoids confrontation with other dogs) and 2 (dog barks when visitors ring the doorbell). In other situations, the owners experienced the emotions in a more intensive way, for instance in situation 8 (dog jumps on people while walking outside), 10 (dog fights outside with other dogs), 12 (dog displays mating behavior on visitors), and 16 (dog does not come back when called).

**Table 2.** Means intensity scores for each of 13 emotions which dog owners (N=55) were asked to consider in reaction to 16 problematic situations outlined to them.

Situation	Emotions												
	Sadness	Compassion	Anxiety	Concern	Powerlessness	Pity	Disappointment	Annoyance	Anger	Irritation	Acceptance	Remorse	Shame
1	1.1	1.4	1.2	1.6	1.2	1.2	1.4	1.2	1.2	1.4	2.3	1.1	1.1
2	1.1	1.2	1.2	1.4	1.6	1.2	1.5	1.2	2.1	2.4	1.6	1.4	1.5
3	1.1	1.7	1.0	1.7	1.9	1.2	1.3	1.4	1.7	2.3	1.8	1.1	1.2
4	1.2	1.2	1.1	1.5	1.9	1.2	1.7	1.3	2.2	2.4	1.5	1.4	1.4
5	1.4	1.8	1.1	2.4	2.3	1.4	2.2	1.3	2.0	2.5	1.2	1.7	1.8
6	1.1	1.2	1.1	1.3	1.3	1.2	1.6	1.2	2.6	2.8	1.2	1.3	1.3
7	1.1	1.1	1.0	1.2	1.4	1.1	1.7	1.2	2.4	2.3	1.2	1.4	1.2
8	1.1	1.1	1.1	1.4	1.5	1.3	1.6	1.3	2.6	2.7	1.2	1.5	1.7
9	1.3	2.4	1.2	2.4	1.9	1.1	1.5	1.2	1.2	1.5	1.6	1.2	1.1
10	1.2	1.2	1.8	1.9	1.8	1.2	1.8	1.2	2.8	2.6	1.2	1.5	1.6
11	1.1	1.4	1.1	1.4	2.2	1.2	1.6	1.3	2.4	2.6	1.3	1.5	1.9
12	1.1	1.1	1.0	1.4	1.6	1.3	1.7	1.3	2.8	2.9	1.1	1.5	2.1
13	1.4	1.1	1.1	1.8	1.8	1.3	2.1	1.3	3.0	1.2	1.0	1.4	1.2
14	1.2	1.1	1.0	1.8	1.4	1.2	1.8	1.3	2.8	2.6	1.2	1.5	1.2
15	1.2	1.1	1.1	1.4	1.6	1.2	1.8	1.4	3.3	2.7	1.0	1.2	1.2
16	1.1	1.1	1.1	1.4	1.6	1.2	1.7	1.3	2.8	2.7	1.1	1.5	1.7
Tot	1.2	1.7	1.1	1.6	1.7	1.2	1.7	1.3	2.4	2.3	1.3	1.4	1.4

Note: Cell entry indicates the mean of the emotion in that situation. N= 55) Situations 1 & 9; fearful dog; situations 2 & 10; aggressive dominant dog; situations 3 & 11; 'mating dog'; situations 4 & 12; emotional dog; situations 5 & 13; bored/lonely dog; situations 6 & 14; eating habits of the dog; situations 7 & 15; unruly dog; situations 8 & 16; disobedient dog.



### Factors underlying dog owner's emotions

The structure that was established by means of factor analysis, followed by a varimax rotation and an oblimin rotation, retained all 13 emotions. The oblimin rotation resulted in rather high correlations (respectively .35 and -.31) between Factor 1 (compassion/anxiety) and Factor 3 (compunction) and Factor 2 (anger) and Factor 3 (compunction). The oblimin solution is unclear and difficult to clarify despite the high correlations; the varimax rotation solution is less complex than the oblimin solution and therefore preferred. A three-factor solution was determined containing three emotional orientations that were frequently encountered in problematic situations with dogs (Table 3). In total, 41.4% of the variance was explained by these three factors. The labelling was carried out on the basis of the highest loadings on the respective factor.

The first factor is marked by high loadings for the emotion of sadness, compassion, anxiety, powerlessness, pity, disappointment, and annoyance. This factor can be labeled as *compassion and anxiety*. The second emotional factor is marked by high loadings for anger, irritation and rejection of the dog's behavior, and was consequently labeled as *anger and irritation*. The third factor is identified with high loadings for the emotions remorse and shame, and was labelled *compunction*.

**Table 3.** Factor structure and labels of 13 emotions which dog owners were asked to rate in intensity (4-point scale) in response to the problematic situations outlined to them; varimax solution.

Emotions	Factor 1 Compassion/anxiety	Factor 2 Anger/irritation	Factor 3 Compunction
Sadness	.70	-	-
Compassion	.64	-	-
Anxiety	.62	-	-
Concern	.58	-	-
Powerlessness	.53	-	-
Pity	.50	-	.44
Disappointment	.41	-	-
Annoyance	.40	-	-
Anger	-	.83	-
Irritation	-	.69	-
Acceptance	-	-.42	-
Remorse	-	-	.77
Shame	-	-	.47
<b>Explained variance</b>	<b>20.0%</b>	<b>12.4%</b>	<b>9.0%</b>

Note: Factors loadings  $\geq |.30|$  are presented.

## Behavioral reactions of dog owners

### Magnitude of the behaviors

The majority of the presented behavioral reactions were familiar to the owners as the majority of the possible reactions (2293/2640 possible reactions; 86.9%) were chosen by the owners.

With regard to the behavioral reactions over all problematic situations, it appeared that owners would mostly punish, demand compliance, address the dog severely, or try to distract it (Table 4). Furthermore, comforting or assisting the dog, and being inactive were infrequently used behavioral reactions. Reward was the behavior least used.

**Table 4.** Percentages of dog owners ( $N=55$ ) who would use a particular disciplinary measure in response to each problematic situation. Percentages  $\geq 50$  are bold.

Disciplinary measures									
Situation	Address	Demand	Punish	Inactive	Comfort	Help	Distract	Ignore	Reward
1	11	22	4	47	34	49	<b>64</b>	20	2
2	<b>60</b>	<b>93</b>	42	10	22	7	45	11	0
3	42	<b>58</b>	27	24	29	5	<b>78</b>	40	2
4	<b>65</b>	<b>85</b>	42	9	29	14	<b>64</b>	16	4
5	40	44	8	5	40	14	38	16	7
6	<b>82</b>	<b>91</b>	<b>52</b>	5	0	5	29	44	0
7	<b>73</b>	<b>82</b>	<b>69</b>	5	7	5	31	9	2
8	<b>76</b>	<b>82</b>	<b>87</b>	5	9	7	42	7	0
9	13	12	2	25	<b>52</b>	<b>56</b>	<b>82</b>	31	5
10	<b>84</b>	<b>94</b>	<b>84</b>	2	5	11	<b>73</b>	13	2
11	<b>64</b>	<b>80</b>	<b>58</b>	5	14	7	<b>84</b>	9	0
12	<b>82</b>	<b>89</b>	<b>80</b>	0	9	2	<b>69</b>	7	0
13	<b>67</b>	<b>56</b>	<b>56</b>	4	9	4	45	16	2
14	<b>78</b>	47	<b>56</b>	5	0	2	18	29	0
15	<b>85</b>	<b>91</b>	<b>83</b>	2	0	2	<b>56</b>	11	0
16	<b>62</b>	<b>78</b>	<b>67</b>	5	7	4	<b>62</b>	9	2
Total	<b>63</b>	<b>69</b>	<b>53</b>	10	17	14	<b>55</b>	16	2

*Note: Situations 1 & 9: fearful dog; situations 2 & 10: aggressive dominant dog; situations 3 & 11: 'mating dog'; situations 4 & 12: emotional dog; situations 5 & 13: bored/lonely dog; situations 6 & 14: eating habits of the dog; situations 7 & 15: unruly dog; situations 8 & 16: disobedient dog.*

Owners would not punish the dog physically when he/she was overexcited or afraid (i.e. situations 1 'dog avoids confrontation', situation 9 'dog is afraid of loud noises'). Nevertheless, compliance would frequently be demanded and the dog would be addressed severely by its owner. In situations where the dog was disobedient or displayed aversive behavior, the punishment would be mostly physical, compliance would be demanded, and the dog would be addressed severely (e.g., in situation 7 'dog lies on bed although forbidden', situation 10 'dog fight outside with other animals', situation 15 'dog chew things'). Furthermore, distraction would be applied in situations where the dog was fearful or emotional (e.g., situation 3 'dog is excited with visitors and urinates', and situation 9 'dog is

afraid of loud noises’) as well as in situations where the dog displayed aggressive or disobedient behavior (i.e. situation 10 ‘the dog fights outside’ or situation 16 ‘dog does not come back when called’).

### Factors underlying dog owner’s reactions

The factorial structure of the behavioral reactions was established by means of factor analysis followed by a varimax rotation and an oblimin rotation. The oblimin rotation resulted in a correlation of  $-.15$ . This correlation is low, therefore the varimax solution was retained.

A two-factor solution was determined (accounting for 37.4% of the variance) and is presented in Table 5.

**Table 5.** Factor structure and labels of dog owner behaviors owners would engage in if their dog performed the problematic behaviors outlined to them in the study. (Varimax solution)

Owner Behavior	Factor 1 Power Assertion	Factor 2 Encouraging behavior
Address severely	.72	-
Demand compliance	.70	-
Punish	.57	-
Inactive	-.43	-
Comforting	-	.70
Help	-	.56
Distraction	-	.34
<b>Explained variance</b>	<b>23.4%</b>	<b>14.0%</b>

*Note: Factors loadings  $\geq |.30|$  are presented.*

Behaviors ‘ignore’ and ‘reward’ were not included in the factor structure because of low factorial loadings. The interpretation and the labeling of the factors was based on the highest loadings of the respective reactions. The first factor contains the following reactions: addressing the dog severely, requesting the dog to stop and making sure that it complies, physical punishment, or taking some kind of action. The reactions that emerged in the first factor are characterized by taking action to enforce the rules and by carrying out elements of prohibition and punishment. This factor has been labeled as *power assertion*.

The second factor contains reactions such as comfort, help or distraction. These reactions do not demand any specific modification of the dog’s behavior. This factor has been labeled as *encouraging/comforting behavior*.

### Male and female dog owners

## Disciplining behavior of dog owners in problematic situations

Differences between men and women were found in the emotional orientations of *anger and compunction*. Women displayed higher levels of anger and irritation in problem situations than men did [ $t_{(459,4)} = 2.22, p < .05$ ]. However, men expressed more intense feelings of compunction [ $t_{(340,0)} = 3.45, p < .01$ ]. Men and women did not differ in the emotional orientation *compassion and anxiety*. Men were also more intense in the behavioral reactions (both punishment and encouraging behavior) [ $t_{(878,0)} = 2.38, p < .05$ ;  $t_{(359,5)} = 3.67, p < .001$ , respectively].

## Discussion

In situations where dog owners are confronted with problematic behavior of their dogs, their emotional reactions can be labeled in three ways: *compassion and anxiety*, *anger and irritation*, and *compunction*. Furthermore, the owner may try to control and modify the dog's behavior by using mainly two strategies: *power assertion* and *encouraging/comforting behavior*.

Though one might expect that anger and irritation would be frequently encountered in problematic situations with dogs, it appears that the most important emotions are of compassion and anxiety. Dix et al. (1989), Siebenheller (1990) and Korzilius (1996) found similar results in parent-child interactions in problematic rearing situations. They maintained that anger and irritation were merely negative emotions, but not the most important emotional orientations or stable characteristic of the child-parent interactions.

Feelings of remorse and shame (compunction) are linked on one hand with situations where owners blame themselves for the (mis)behavior of the dog, and, on the other hand, with situations where owners associate the misbehavior to the dog's actions (Ben-Michael et al, 1997). This corresponds with the findings of Voith, Wright and Daneman (1992) and O'Farrell (1997) who showed that owners frequently think of themselves as contributors to the 'bad' behavior of their pets and feel guilty and responsible for the pet's behavior. Rajecki, et al. (1998) also found that a defying dog was rated with lower intent, blame, and feelings of shame than a defying child in the same circumstances. Interestingly, Siebenheller (1990) and Korzilius (1996) did not identified feelings of compunction in the studies parent-child interactions in problematic situations.

The potential behavioral reactions to the dog in problematic situations (power assertion and encouraging behavior) are similar to those identified in parents (Siebenheller, 1990; Korzilius, 1996). Contrary to parents in problematic situations, dog owners chose power assertive

behaviors as being the most important and used them frequently during confrontations with dogs in problematic situations. When a child misbehaves, the behavioral correction involves, besides power assertion, almost always a discussion about the consequences of the misbehavior and an attempt is made to motivate the child using reasoning (Siebenheller 1990; Korzilius 1996). Obviously, it is not feasible for owners to discuss the consequences of the behavior with their dogs.

About 10% of the variance was explained by *encouraging behavior*, which shows that there are dog owners who prefer not to enforce compliance of rules as a behavior modification strategy. Askew (1996) argues that the owner who reacts to misbehavior by encouraging or helping the dog, makes an attempt to alleviate the dog's situation without actually correcting its behavior. This implies that encouragement is used to prevent or avoid problematic behavior. Similarly, the perception of the child as a victim or as having personal problems is confronted with feelings of pity and worry. In these situations the parents frequently use encouraging behavior (Siebenheller 1990; Korzilius 1996).

### **Male and female dog owners**

In general, the potential behavioral reactions (punishment as well as encouragement) of the male owners towards dogs that exhibit problematic behavior were more intense compared to women. Men tend to be more sensitive than women to behavior that is perceived as being inappropriate, particularly if they experience it as a violation of private or public order (Sanders 1990) and, consequently, they tend to express more intensive feelings of compunction.

Contrary to men, women tend to react with increased anger and irritation in cases of disobedience or when the dog does not comply with the rules. Ross and Willigen (1996) showed that women are more vulnerable to the stressors of parenthood, as they usually share a larger proportion of care and nurturing than men. Moreover, women are more exposed to the increased of responsibilities in the household, including the care of the dogs (Kidd and Kidd 1990; Herzog, Betuart and Pittman 1991; Rasmussen and Rajecki 1995). As a result of the inequality in the distribution of the responsibilities women are more likely to experience and express higher levels of anger than men (Ross and Willigen 1996).

Although dogs are not considered as mental equals to people, they are regarded as being able to reciprocate and have a social place in the daily routines and events of the family (Sanders 1993). Consequently, dogs can evoke in women, in situations of disobedience or

## **Disciplining behavior of dog owners in problematic situations**

inappropriate behavior, emotional reactions of anger and irritation. These are similar to their reactions to children displaying inappropriate behavior (Siebenheller 1988, 1990; Korzilius 1996).

### **Limitations of the study, and future recommendations**

The present study has to consider several limitations and several recommendations and provide some recommendations for future research. Firstly, this study uses a group that has a majority of female respondents. Therefore, the assessment of the emotional and the behavioral reactions for the whole group may be biased.

Secondly, this study is about what the dog owners perceive as problematic and how they would react, and is not necessarily reflective of how canine behavior would diagnose or treat such behavior. Accordingly, we did not choose the situations but let the owners select them. Owners, even experienced ones, are frequently unfamiliar with, or misunderstand their dog's behavior. Even if people own dogs from the same breed for many years they may still make mistakes because they are unaware of the subtle differences in the personality of the dogs or the differences in the contextual character of the situation. Indeed, some of the situations in the present study which were similar were perceived by the owners as different (e.g., 3 and 11), and situations which seemed to belong to different categories (like situations 8 and 16) were grouped by the owners in the same cluster.

Thirdly, to gain more insight into the reactions of dog owners in problematic situations, future research should investigate if there are causal relationships between perceptions, emotions and behavioral reactions as has been shown in children (Korzilius 1996).

Fourthly, there are some aspects which can influence the choice of behavioral reaction which have not been discussed in the present study, such as the bias of the dog owner toward disciplining (Siebenheller 1990, Korzilius 1996). For example, a kind-hearted person may bias the interaction with the dog, by using less power assertion in situations where this reaction would seem obvious. Future research should investigate how the situation and the personality traits of the owners influence the behavioral reaction.

## References

- Albert, A. and Bulcroft, K. 1987. Pets and their Urban Life. *Anthrozoös*. 1(1).9-23.
- Askew, H.R. 1996. *Treatment of Behaviour Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Science.
- Ben-Michael, J., Vossen, J.M.H., Felling, A.J.A. and Peters, V.A.M. 1997. The Perception of Problematic Behaviour in dogs: Application of Multi-dimensional Scaling and Hierarchical Cluster Analysis. *Anthrozoös*. 10(4). 198-213.
- Dix, T., Ruble, D.N. and Zambarano, R.J. 1989. Mothers' implicit theories of discipline: Child effects, parent effects, and the attribution process. *Child Development*. 60. 1373-1391.
- Ferguson, G.A. and Takane, Y. 1989. *Statistical Analysis in Psychology and Education*. McGraw Hill International Editions.
- Fogle, B. 1990. *The dog's mind*. London. London: Pelham Books.
- Gerris, J.R.M. 1990. Research on parent-child interactions within a system-ecological process model of family research. In Koops, W., Soppe, A.J.G., van der Linden, J.L., Molenaar P.C.M. and. Schroot, J.J.F (eds). *Developmental Psychology Behind the Dikes. An Outline of Developmental Psychological Research in the Netherlands*. Delft: Eburon. 195-210.
- Herzog, H.A., Betuart, N.C. and Pittman, R.B. 1991. Gender, sex role orientation, and attitudes towards animals. *Anthrozoös*. 4(3). 184-191.
- Jago, A. and Serpell, J.A. 1996. Owner characteristics and interaction and the prevalence of canine behaviour problems. *Applied Animal Behaviour Sciences*. 47. 31-42.
- Kidd, A.H. and Kidd R.M. 1990. Factors in children's attitudes towards pets. *Psychological Reports*. 66. 775-786.
- Kim, O.N. and Mueller C. W. 1978. *Factor Analysis: Statistical Methods and Practical Issues*. Sage University Papers.
- Korzilius, H.P.L.M. 1996. *Mental representations of parenting. Structures of perceptions, cognitions, emotions, and, behavioural reactions in child-rearing situations*. Doctoral dissertation. Nijmegen: University of Nijmegen.
- Magnusson, D. 1988. *Paths Through Life: Vol. 1. Individual Development from an Interactional Perspective: A Longitudinal Study*. Hillsdale, New Jersey: Lawrence Erlbaum Associates Inc.
- Mallon, G.P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös*. 6(1). 43-47.
- O'Farrell, V. 1992. *Problem dog - Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How not to be a Problem Owner*. London: Methuen.
- O'Farrell, V. 1995. The effect of owner attitude in behaviour. In Serpell, J. (ed). *The Domestic Dog*. Cambridge: Cambridge University Press. 154-158.
- O'Farrell, V. 1997. Owner attitude and dog behaviour problems. *Applied Animal Behaviour Science*. 52. 205-213.
- Neville, P. 1991. *Do Dogs Need Shrinks*. London: Sidwick and Jackson.
- Overall, K.L. 1997. *Clinical Behavioural Medicine for Small Animals*. St. Louis, MI: Mosby.
- Peters, V.A.M. 1985. *Docenten en hun probleemsituaties. (Teachers and problematic situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Rajecki, D.W., Rasmussen, J.L. Modlin, S.J. and Holder A.M. 1998. Dogs bites boy: judgements of blame and shame. *Anthrozoös*. 11(2). 66-73.
- Rasmussen, J.L. and Rajecki, D.W. 1995. Differences in Similarities in Human's Perceptions of the Thinking and Feeling of a Dog and a Boy. *Society and Animals*. 3. 117-137

## Disciplining behavior of dog owners in problematic situations

- Ross, C.E. and Willigen van M. 1996. Gender, parenthood, and anger. *Journal of the Marriage and the Family*. 58. 572-584.
- Sanders, C.R. 1990. Excusing tactics: Social responses to the public misbehavior of companion animals. *Anthrozoös*. 4(2). 82-90.
- Sanders, C.R. 1993. Understanding Dogs: Caretakers' attributions of mindedness in canine-human relationship. *Journal of Contemporary Ethnography*. 22. 205-226.
- Serpell, J.A. 1998. *Perceiving and misperceiving guide dogs: reliability of behavioral survey data*. Paper presented at the ISAZ '98 Conference, Prague, Czech Republic, 10-12<sup>th</sup> September 1998.
- Siebenheller, F.A. 1988. Problematische opvoedingssituaties: subjectieve percepties, affectieve belevingen en gedragingen van ouders (Problematic child-rearing situations: subjective perceptions, affective reactions and behaviors of parents). In Gerris, J.R.M. and van Acker, J. (eds). *Gezinsrelaties onderzocht*. Amsterdam/Lisse: Swets and Zeitlinger. 77-98.
- Siebenheller, F.A. 1990. *Problematische Opvoedingssituaties: Percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic Child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of Antecedents of Reactions of Parents in Everyday Child-rearing Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Turner, D.C. 1997. Treating canine and feline behaviour problems and advising clients. *Applied Animal Behaviour Science*. 52(3-4). 199-204.
- Voith, V. L. 1983. Animal behaviour problems: an overview. In Katcher, A.H. and Beck, A.M. (eds). *New Perspectives on our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 181-186.
- Voith, V. L., Wright, J.C. and Daneman, P.J. 1992. Is there a relationship between canine behaviour problems and spoiling activities, anthropomorphism, and obedience training? *Applied Animal Behaviour Science*. 34. 263-272.



## Chapter 4.

### An exploratory model of dog disciplining

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#### Abstract

*This study examines the possible relationships among dog owners' perceptions of, and emotional and behavioral responses to, problematic situations involving their dogs, and investigates differences in these in different subgroups of owners. The dominant sequence of the interaction is defined as perception–cognition–emotion–behavior, with this study focusing upon perceptual, emotional, and behavioral responses. Fifty-five dog owners were presented with 16 descriptions of everyday problematic situations with a dog, and were asked to record the degree to which they elicited emotions such as irritation, anger, sorrow, and anxiety. They were further asked which disciplinary actions they would use in each situation. The results form a general exploratory model of perceptual–emotional–behavioral responses, within which the two most significant sub-models were power assertion and encouragement/comfort. Some gender differences in these models were also discovered.*

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*Key words: Dogs, Behavior problems, Disciplinary behavior.*

### **Introduction**

There is increasing recognition that companion animals are a meaningful component of people's lives. Various studies emphasize that a dog's behavior is an important determinant for the success of the dog-owner relationship, since problematic behavior of the dog can impede and weaken that relationship (Fogle 1990; Clark and Boyer 1993; McBride 1995; O'Farrell, 1997).

Previous studies have suggested that a lack of authority, knowledge, discipline, or control on the part of the owners can result in behavioral problems in dogs such as, dominance aggression, separation anxiety, and destructive behavior (Hart and Hart 1985; Fisher 1993; Peachy 1993; Rogerson 1993; O'Farrell 1997). Some other factors that are considered to have a significant impact on the prevalence of behavioral problems are: obedience training, sleeping arrangements for the dog, and the prior experience of the owner (Campbell 1986; Clark and Boyer 1993; Jagoe and Serpell 1996). However, reliable evidence to support these ideas is scarce.

The results of the above-mentioned studies are at odds with the results of Borchelt and Voith (1986) and Voith, Wright and Daneman (1992) who found no statistical evidence that lack of obedience training, or attributions of anthropomorphic behavior contribute to the occurrence of behavioral problems. They suggested that some behavior problems originate in species-typical behaviors and have to be considered within the context in which the dog engages in the problematic behavior, as well as in the daily management of the dog. Askew (1996) and Overall (1997) agree that, in order to understand why the behavior is perceived as a problem for its owner, it is not enough to focus on the etiological classification of the behavior ("normal" and "abnormal"), as Borchelt and Voith (1985) suggested. They suggested that it is also necessary to consider the fact that deferential behaviors are context dependent and are based on knowledge of the age and size of the dog, as well as the situations in which individuals interact. It is unclear, however, to what degree situation, owner, and dog characteristics each influence problematic behaviors. In addition, environmental influences condition or reinforce the dog's behavior; for example, in situations where the owner intentionally or unintentionally reinforces the dog's behavior by petting it when it displays aggressive behavior against strangers.

### **Dimensions of disciplinary behavior**

Overall (1997) suggested that humans and canids share many aspects of their social systems and have social hierarchies that are mainly sustained by deference (Netto, van den Borg and Siegers 1992). The relationship between the owner and the dog is frequently highly anthropomorphized as dog owners tend to attribute human qualities to their dog's behavior (Hart and Hart 1985; Fogle 1990; Askew 1996; Mitchell and Hamm 1997).

Askew (1996) suggested that the owners' attitudes towards their pets are affected by an evolutionary development similar to that of parents' attitudes towards their young children, and that pet keeping practices and the attitudes of owners towards their pet resembles parental behavior (Askew 1996; Overall 1997). Therefore, it is not surprising that dog owners might ascribe "human meaning" to dog signals because they perceive them to resemble human signals. Owners will also sometimes correct *normal* dog behavior because they consider it inappropriate (McBride 1995; O'Farrell 1995, 1997; Overall 1997; Turner 1997). When dog owners are confronted with inappropriate dog behavior, the most prevalent and powerful disciplining strategy is "power assertion" (physical or verbal) (Ben-Michael et al. 2000).

Power assertion is used to reduce the intensity and duration of problematic behavior, and even to end it. The second most used disciplining strategy is 'encouraging' behavior (Ben-Michael et al. 2000). This strategy has beneficial problem-reducing effects and alleviates fearful reactions in the dog.

The framework for the research questions in the present study is based upon the assumption that, similar to child-parent interaction (Siebenheller 1990; Korzilius 1996), the immediate antecedents of owners' disciplinary attempts are associated with their perceptions of the problematic behavior and with the emotional reactions to this behavior.

By means of an exploratory path model, this study looks for the presence of possible relationships among owners' perceptions of, and emotional and behavioral reactions to, problematic situations with their dog.

In the literature, it is suggested that owner characteristics such as gender (Serpell 1998), marital status, number of children, and family composition (Smith 1983; Albert and Bulcroft 1987; Melson 1988; Mallon 1993) are relevant factors in owners' interactions with their dog. Consequently, the present study also examines whether the gender of the owner is a source of variation in the possible relationships among the owner's perceptions of, and emotional and behavioral responses to, problematic situations with their dog.

### **Methods**

#### **Participants**

The original sample consisted of 116 self-selected dog owners who voluntarily agreed to complete a questionnaire about their relationship with their dog. The participants were contacted through requests in local and regional newspapers, university newspapers, and through appeals on local and regional radio stations. Eighty-three persons completed and returned the questionnaire. Because we wanted to study specific interactional influences on the dog owner in problematic situations, it was important to conduct a separate investigation on the perceptions, emotions and behaviors that are involved in any given situation. Fifty-five participants agreed to take part in that investigation. The selected group contained 41 (75%) females and 14 (25%) males, with an average age of 46.7 years ( $SD=12.11$ ).

The dogs owned ( $N=55$ ) were a mixture of purebred and mixed breeds, and their mean age was 6.8 years ( $SD=3.38$ ). From the total group of dogs, 40% were male and 60% were female; more than the half (54.5%) were entire. Approximately 75% of the dogs had been owned for more than three years, while the rest had been owned for between one and two years.

#### **Procedure**

Dog owners were given a questionnaire which consisted of 16 brief descriptions of various every day situations with dogs, as used in the Q-sorting task (Ben-Michael et al. 1997). An example to such situation is:

**When visitors arrive, the dog (usually very quiet) barks and growls continuously.**

The owners were asked to consider each situation, even if they had not experienced it personally, and to:

1. Indicate the degree to which they experienced 13 emotions (disappointment, anger, annoyance, concern, irritation, compassion, powerlessness, anxiety, sadness, pity, acceptance, remorse, and shame) on a 4-point scale (none, not so much, much, very much), and
2. To choose 1–3 applicable reactions from 9 disciplinary actions offered: physical punishment, help, ignore, comfort, reward, be inactive, demand compliance, distract, address severely. These reactions were based on information that was collected previously from dog

owners (other than the participants of this study) and from literature about the treatment of behavior problems in dogs (Voith 1983; Fogle 1990; O'Farrell 1992, 1994; Overall 1997).

The descriptions of the perceptions owners had of problematic situations were achieved by letting dog owners sort 39 situations according to similarity (Q-sort). A detailed description of the Q-sort procedure and the analysis is outlined in Ben-Michael et al. (1997). A multidimensional analysis resulted in three dimensions. These indicated that the situations perceived as problematic could be categorized in six ways (two per dimension): P1 = disobedient dog – fearful/submissive dog, P2 = aversive/offensive dog (e.g., destructive behavior, coprophagia) – aggressive dog and, P3 = uncontrolled dog (e.g., restless) – ‘mating’ behavior of the dog (for a detailed description see Ben-Michael et al. 1997).

The factors underlying the owners' emotional and behavioral reactions were assessed by means of factor analysis (Ben-Michael et al. 2000). Factor analysis of the 13 emotional reactions to the 16 problematic situations resulted in three factors: *compassion and anxiety* (E1), *anger and irritation* (E2), and *compunction* (indicating remorse and shame) (E3). The factor analysis of the nine behavioral reactions to the 16 problematic situations resulted in two factors: *power assertion* (R1) which was characterized by a high loading on stern reactions of the owner, and *encouraging behavior* (R2) which loaded highly on the behaviors ‘help’ and ‘distraction’, which were aimed to comfort the dog.

The owners' responses to the problematic situations were differentiated into eight measurement scores which were labeled as follows: P1 to P3 (perceptions), E1 to E3 (emotions), R1 and R2 (behavioral reactions). These are summarized in Table 1.

**Table 1.** Labels and measurements of owner representations in problematic situations with the dog.

P1 (-) ... disobedient dog .....	0 .....	fearful/submissive dog....	P1 (+)
P2 (-) ... aversive/offensive dog ...	0 .....	aggressive dog .....	P2 (+)
P3 (-) ... uncontrolled dog .....	0 .....	sexual/mating behavior...	P2 (+)
E1 .....	compassion and anxiety .....		
E2 .....	anger and irritation .....		
E3 .....	compunction .....		
R1 .....	power assertion .....		
R2 .....	encouraging behavior .....		

### **Analysis**

The owner in each situation is the basic unit of analysis. Consequently, the maximum sample size is  $55 \times 16$  situations = 880. As it is unlikely that an owner's answer in one situation is independent of her/his answer in another situation, it is questionable whether the sample should be considered as 880 independent units. Indeed, significance levels of correlations and regression coefficients are likely to be over-estimates. However, in assessing our findings we used a critical value of a sample size of 55, i.e. correlations  $\geq .26$  at 5% significance level. Thus, by focusing on substantive coefficients, we avoided the problem of over-estimation and we can assume that our conclusions correctly reflect the information collected.

However, in order to test the possible problem of dependence of the 880 units in relation to the factor structure, we studied the extent to which the derived factors resulted from various sources of variation (between subjects, between situations and idiosyncratic variation between subjects' reactions to situations).

We performed a MANOVA with subject and situation as 'between subjects' factors, and the emotions as 'within subjects'. With regard to the emotional reactions to problematic situations, it appeared that the subject and situation effects were much smaller in magnitude than the variance explained by the emotions. All three sources of variation were statistically significant (F-values: subject  $F_{(54, 810)} = 12.41$ ,  $p < 0.001$ ; situation  $F_{(15, 810)} = 7.71$ ,  $p < 0.001$ ; emotions  $F_{(12, 9720)} = 468.46$ ,  $p < 0.001$ ). However, when focusing on the ratios between the explained variance of each source (mean squares for subject: 13.33; situation: 8.28; emotions: 157.76), the emotions are by far the most important factor.

The effect for the behavioral reactions to problematic situations was also much higher than effects due to subject and situation variation. Pertaining to the behavioral responses, the MANOVA produced the following results: subjects ( $F_{(54, 810)} = 12.04$ ,  $p < 0.001$ ); situations ( $F_{(15, 810)} = 8.10$ ,  $p < 0.001$ ) and behavioral responses ( $F_{(8, 6480)} = 588.89$ ,  $p < 0.001$ ). The ratios of the various sources of explained variation indicated a larger effect of the behavioral responses (mean squares for subjects: 1.32; situations: 0.89; reactions: 59.94) than that of the subjects and situations. With regard to the three perception dimensions, there were no significant effects for the subject factor. However, the situation factor is, as can be expected from Ben-Michael et al. (1997), significant for the three dimensions (P1:  $F_{(15, 810)} = 6557.21$ ,  $p < 0.001$ ; P2:  $F_{(15, 810)} = 3050.99$ ,  $p < 0.001$ ; P3:  $F_{(15, 810)} = 1639.51$ ,  $p < 0.001$ ).

Though some of the derived factors are dependent on the subject in the situation, these interactions are by far the least important sources of variation of the dog owners' emotional and behavioral responses to problematic situations.

### **Dog owners' mental representations and model exploration**

In the present study, we used the term “representation” to bundle together the various dog owner reactions: perceptions, emotions, and behaviors. Our use of the term is in accordance with Korzilius (1996), who, in his study on child disciplining, applied representations as a bundle name for the various parental processing aspects (such as perceptions, cognitions, emotional reactions and behavioral responses) that take place in the minds of the parents during interactions with their child.

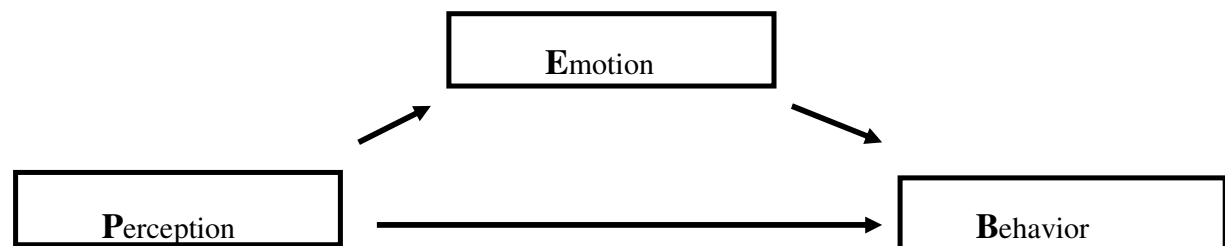
An exploratory model related to the owners' mental representations of perceptions, emotions and behavioral responses will first be described. Secondly, the relationships of situation-specific perceptions, emotions, and behavioral responses will be investigated in relation to the sex of the owner. The exploration of the dog–owner relationships was carried out by means of multiple regression analysis.

## **Results**

### **General model of dog owner responses**

Based on the theoretical considerations and results from previous studies (Siebenheller 1990; Korzilius 1996), the most probable sequence of the dog owners' mental representations in the problematic situations is perception emotional orientation behavioral response. The possible paths are shown in Figure 1.

**Figure 1.** Structure of the exploratory model of dog owner mental representations in problematic behavior situations.



In this model the behavioral responses power assertion (R1) and encouraging behavior (R2) are predicted by perception dimensions (P1 to P3) and emotional orientations (E1 to E3).

The owner's behavioral responses to a problematic situation may be a direct effect of the perception of the situation (P→R), or are mediated by the emotions which emerge as a result

## An exploratory model of dog disciplining

of the perception of the situation: an indirect effect ( $P \rightarrow E \rightarrow R$ ). The emotional response could also be an independent variable:  $E \rightarrow R$  (in which perception would not significantly affect emotion). In total, eight measurement scores of the dog owners' mental representations were differentiated and correlated. The results are shown in Table 2.

**Table 2.** Pearson Correlations of eight measures of situation-specific owner representations ( $N=880$ ).

	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>E1</b>	<b>E2</b>	<b>E3</b>	<b>R1</b>
P2	-.12						
P3	-.09	.17					
E1	.18	-.01	-.02				
E2	<b>-.43</b>	-.05	-.08	.00			
E3	-.07	.03	.03	.12	.10		
R1	<b>-.53</b>	.06	.07	-.03	<b>.54</b>	.13	
R2	<b>.31</b>	.08	.07	.31	<b>-.29</b>	-.00	-.10

Note: Correlations  $\geq |.26|$  (in bold) are considered to be significant at the 5% level (see Analysis). P1: disobedient-fearful; P2: aversive/offensive-aggressive; P3: uncontrolled-'mating'; E1: compassion and anxiety; E2: anger and irritation; E3: compunction; R1: power assertion; R2: encouraging behavior.

The behavioral strategies of the dog owners can be explained by the perception of the problematic situations by owners and by the emotions they experience as a result of these (Table 3). The most important dimension to explain dog owner behavior was P1, which consisted on one pole (P1-) the 'perception of the dog as disobedient' and on the other pole (P1+) the 'perception of the dog as fearful and submissive'. The 'perception of the dog as disobedient' (P1-) explained power assertion (R1) and compunction (remorse and shame) (E3). The most important emotions which accounted for both behavior strategies were anger and irritation (E2) that predicted power assertion, and anxiety and compassion (E1) that predicted encouraging behavior.

The results can be explained in the following manner: for example, the correlation of  $-.53$  between P1 and R1 (Table 2) indicates that low scores on P1 are related to high scores on R1 and vice versa. Thus, either the owner's perception of the dog as disobedient (P1-) was correlated with the use of much power assertion behavior (R1), or that the perception of the dog as fearful or submissive (P1+) was related to the exercising of less power assertion (R1). Multiple regression analyses (regression method: stepwise) were performed with the following dependent variables: three emotional orientations (as dependent variable as well as an independent variable) and two behavioral responses. Significant regression values are given in Table 3.



**Table 3.** Results of the multiple regression analysis for the total sample.

Variable	adj. R <sup>2</sup>	df df1 df2	F-value	Important predictors	Less important predictors	Predictors not in the model
R1	.40	4, 875	147.14	-P1 E2	E3 P3	P2 E1
R2	.21	5, 784	30.50	P1,E1,E2	P2 P3	E3
E1	.03	1, 878	10.20	P1		P2P3
E2	.21	3, 876	77.18	-P1	-P3 -P2	
E3	.00	1, 876	4.66	-P1		P2P3

*Note: All models significant  $p < .05$ . A negative sign (-) before a predictor means that they had a negative beta coefficient ( $N = 880$ )*

### Types of models of the dog owners' responses

The two most significant models that could be extracted from the data concerning the behavior strategies of the dog owners in problematic situations were: 'Power

Assertion' and 'Encouragement/comfort' (Figures 2 and 3, respectively).

The perception of the dog as disobedient (P1-) predicts the emotional orientation of anger/irritation (E2), that leads to the use of power assertion behavior (R1) (Figure 2).

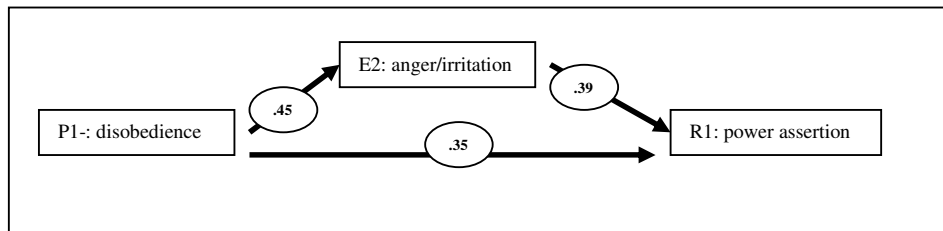
The "Power Assertion" model, for example, takes place in a situation where a dog sniffs unknown people while walking and refuses to comply with the owner's command to stop. The owner can try instantly to stop this action by pulling the dog away and/or by addressing him severely (P1- → R1). The behavior of the dog might also stimulate feelings of anger and irritation (P1- → E2) which affects the owner's reaction (E2 → R1). In the later case, the emotions have a mediating role between the perception (the psychological meaning of the situation: dog annoys a stranger and the owner is likely to find himself in an awkward position) and the reaction (punishment).

Encouraging behavior (R2) is predicted by the perception of the dog as fearful and submissive (P1+) and by the emotional orientation of compassion and anxiety (E1) or by the emotional orientation of anger and irritation (E2), as shown in Figure 3.

Perceiving a dog to be fearful generally evokes feelings of compassion that stimulate encouraging behavior. However, the perception may also lead to the development of offensive or aggressive behavior, which explains why feelings of anger and irritation can also be present in these situations. For example, when the dog is 'afraid of other dogs on the street' the owner may be inclined to encourage the dog to overcome his fear by talking to him or touching him. The dog's fear, however, could develop into aggression, in which case the owner may become irritated

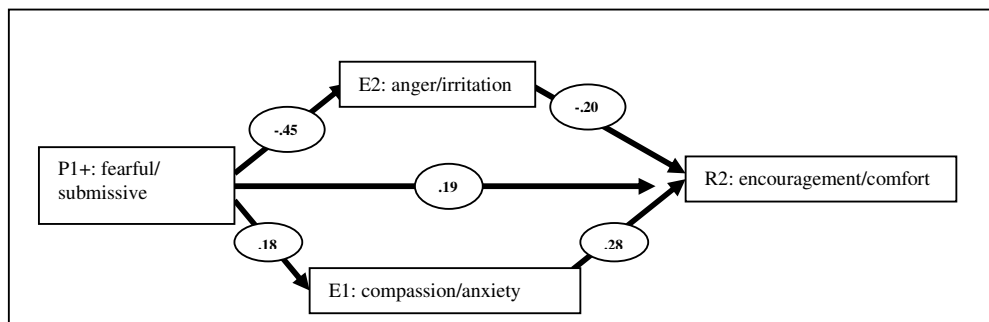
## An exploratory model of dog disciplining

**Figure 2.** Power Assertion model of dog owner mental representations in problematic behavior situations.



Note: Standardized regression coefficients ( $N=880$ ).

**Figure 3.** ‘Encouragement/comfort’ model of dog owner mental representations in problematic behavior situations.



Note: Standardized regression coefficients ( $N=880$ )

### Male and female owners and the exploratory model

The present study also addressed the question of whether the exploratory models for the total group of dog owners (Figure 2 and 3) vary between male and female dog owners (Figure 4 to 7). In most cases there were no large differences between the models generated by sex subgroups and those from the total group (see Appendix 1). This indicates that the exploratory model for the total group of owners offers an adequate basis for describing the relationships between the owners’ reactions in problematic situations. Nevertheless, gender did produce variations in some paths of the exploratory models. The study of male and female owners was carried out using multiple regression analysis (regression method: step-wise).

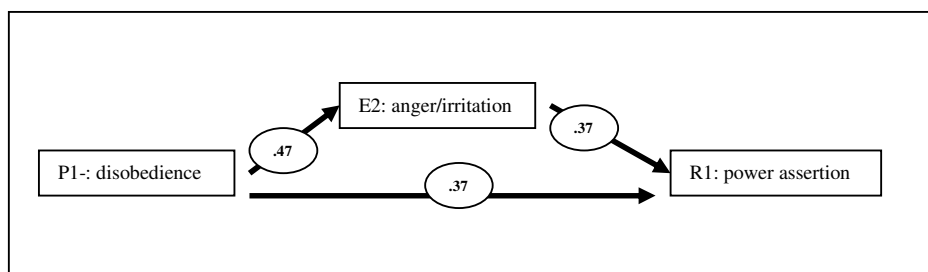
### “Power-assertion” model for male and female owners

In particular, the sex of the owner appeared to affect some paths in the basic exploratory model that describes the power assertion behavior strategy. The perception of the dog as disobedient more frequently led female owners to feelings of anger and irritation and

to power assertion behavior. The outlined path in the model is P1- →E2 →R1 as shown in Figure 4.

Male owners showed a more complex pattern of perceptions and emotions as illustrated in Figure 5. They, too, showed the P1- →E2 →R1 path. However, for male owners the model had many additional paths leading to R1. Paths such as E2→R1 had a higher effect for males (+.52) than for the total group (+.39) or for the female group (+.37).

**Figure 4.** 'Power Assertion' model of dog owner mental representations in problematic behavior situations: female owners.



*Note: Standardized regression coefficients ( $N=656$ )*

Furthermore, for males, feelings of compassion and anxiety (E1) reduced the power assertion reaction, which was opposite to the effect of feelings of compunction (E3). For these two emotions, no accompanying perceptions were found in the regression analyses. Possibly the perceptions that influence feelings of compassion, anxiety, and compunction in male owners were not measured in this study. Though the perception of the sexual behavior of the dog (P3+) reduced feelings of anger, it nevertheless resulted in the power assertion reaction in the male subgroup.

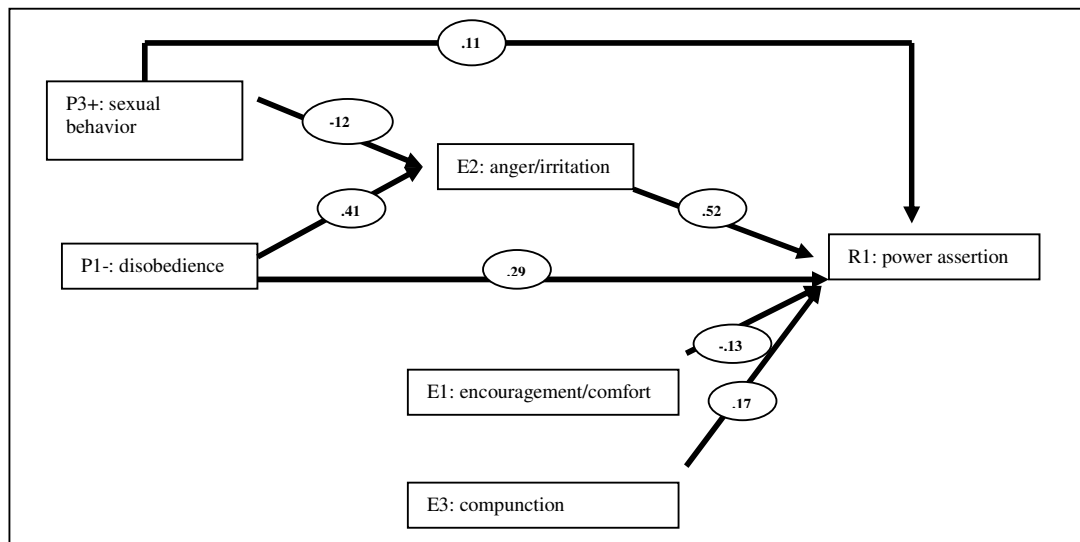
It can be concluded that the perception of the dog as disobedient (P1-) is the most important predictor of anger and irritation, and punitive behavior. In the male group, the perceptions of the dog's sexual behavior, and the emotions of compassion and compunction, were related to the punitive response of the owner.

#### **'Encouragement/comfort' model for male and female owners**

The perception of the dog as fearful and sub-missive (P1+) was the most important predictor of encouraging behavior (R2), mostly mediated by feelings of compassion and anxiety (E1). For this model there were some variations between female and male dog owners, as shown in Figures 6 and 7.

## An exploratory model of dog disciplining

**Figure 5.** Attitudes in the Power Assertion model of dog owner in problematic behavior situations: male owners.

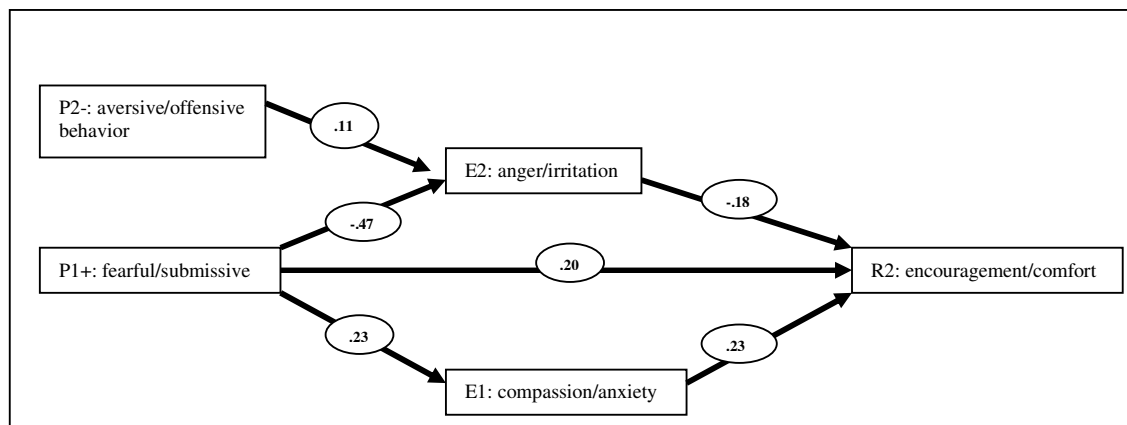


Note: Standardized regression coefficients ( $N=224$ ).

In the subgroup of female owners (Figure 6), the basic structure of the exploratory models was maintained. However, there was also a weak path from the perception of the dog as “aversive/offensive”, which somewhat intensified feelings of anger and reduced encouraging behavior ( $P2- \rightarrow E2 \rightarrow R2$ ).

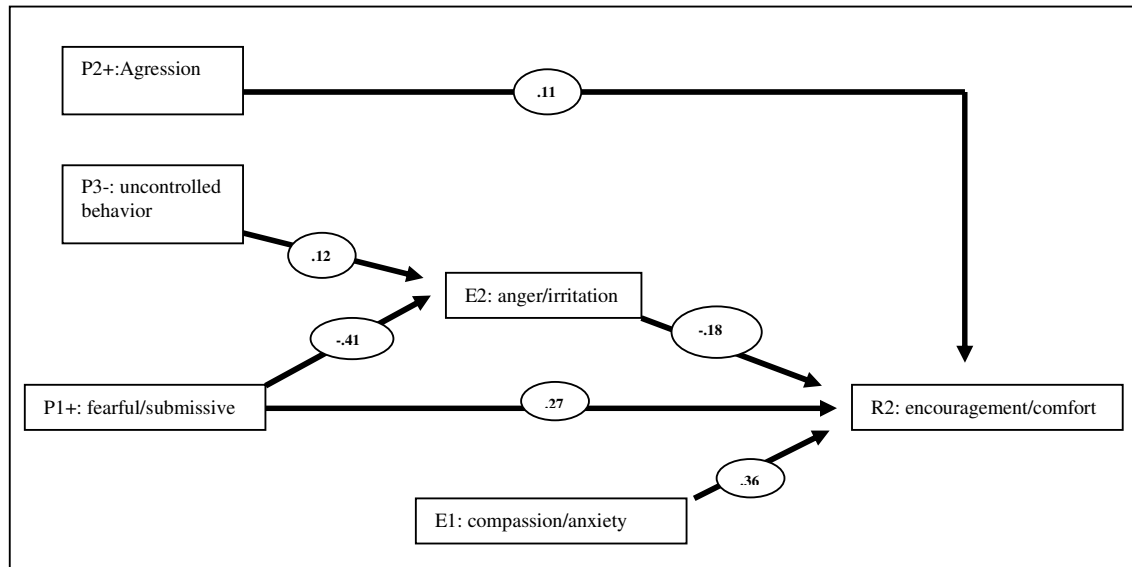
It is possible to imagine a situation in which the perception of the dog as fearful (afraid of strange people, for example) would stimulate the owner to feel compassion. At the same time, the dog, in reaction to anxiety, may react by urinating on the floor, a reaction the owner might perceive as offensive. The owner then becomes irritated and decreases comforting behavior.

**Figure 6.** Encouragement/comfort behavior model of dog owner in problematic behavior situations: female owners.



Note: Standardized regression coefficients ( $N=656$ ).

**Figure 7.** Encouragement/comfort behavior model of dog owner mental representations in problematic behavior situations: male owners.



*Note: Standardized regression coefficients ( $N=224$ ).*

Male dog owners (Figure 7) displayed encouraging behavior that was influenced by the perception of the dog as fearful. The male dog owner was also likely to let the emotions of compassion result in encouraging behavior, but it is unknown which perception affects these feelings.

The size of the coefficient effects in the path  $P1+ \rightarrow R2$  was higher in the male group (+.27) in comparison with the total group (+.19) and the female group (+.18), as was the coefficient in the path  $E1 \rightarrow R2$  (+.36) in comparison with the total group (+.28) and the female group (+.23). Therefore male owners showed slightly stronger reactions in these situations than female owners. ‘Uncontrolled behavior’ ( $P3-$ ) elicited slightly the feelings of anger (+.12), while ‘aggressive behavior’ ( $P2+$ ) had a slight positive effect on encouraging behavior in the male group (+.11). This implies that male owners might interpret aggressive behavior as helplessness. Thus, the dog must be guided or helped, and not punished.

It can be concluded that in the model of ‘encouragement/comfort’ the perception of the dog as fearful and submissive is the most important predictor of the emotions of compassion and anxiety, and encouraging behavior. Perceptions of the dog as displaying aversive/offensive behavior (for female owners) and uncontrolled behavior (for male owners) were also mildly associated with an increase in the feelings of anger and irritation, and a decrease in

## **An exploratory model of dog disciplining**

encouraging behavior. In addition, the perception of aggression in male owners was mildly associated with an increase in encouraging behavior.

## **Discussion**

The current study focused on the dog owner and describes the underlying structures of owners' mental representations: perceptions of, and emotional and behavioral responses to problematic situations with dogs. The results show the existence of a structure that illustrates many problematic situations with dogs and involves relationships of mental representations that are outlined in a basic exploratory model: Perception → Emotion → Reaction.

Moreover, the similarity in the structure of the models and the small differences in the magnitude of the path coefficients for sex subgroups suggest there is, to a certain degree, a collective situation-specific structure of behavior that is common to all dog owners.

Two central models emerged: a 'power assertion' model and an 'encouragement/comfort' model. Comparison of the path coefficients of these two models revealed that the path effects of the model 'power assertion' were higher than the path effects of the model 'encouragement/comfort'. This indicates that perception of the dog as disobedient (P1-) is more predictable in its emotional and behavioral outcomes than is the perception of the dog as fearful (P1+). The emotional orientation of anger and irritation was the most important predictor of power assertion behavior. Anger and irritation were also important in decreasing encouraging behavior.

In situations where the dog is clearly a transgressor, the use of power assertion behavior is mostly an accepted and obvious behavioral response. For instance, when a dog behaves aggressively towards another dog or person, the owner wants immediate control because instant compliance in these situations reduces the chances for an unpleasant conflict with the other dog, as well as with its owner. This situation has to do with disciplining as a public performance (Goodnow and Collins 1990). In situations where the owner reacts by encouraging and helping the dog, the relationships are more complicated. The dog is perceived mainly as fearful and the owner is likely to show compassion and anxiety. Nevertheless, feelings of anger and irritation are not completely diminished and they affect the owner's reaction. It means that when a dog displays fear it is sometimes difficult to understand the interrelations among the owners' perceptions, emotions and behavioral reactions, and thus some reactive patterns may not be distinguishable.

The perception of the dog as having 'sexual needs' (P3+) reduced in male owners the feelings of anger and irritation. However, this behavior was still punished. Owners are less angry and irritated by this behavior when they accept it as natural dog behavior and can understand the drive for reproduction (Fogle 1990; Ben-Michael et al. 1997; Overall 1997; Dodman 1999). However, owners frequently associate mounting behavior that is directed towards humans or inanimate objects with sexual behavior, and identify it less often with its social components, such as communicative gestures (Overall 1997), or displacement activity in response to conflict, excitement or stress (Fogle 1990; O'Farrell 1992). The display of sexual behavior in public annoys and upsets people (Overall 1997; Dodman 1999) and increases their power assertion reaction.

Because dogs are frequently considered as being a part of the family (Mallon 1993; Serpell 1996), we compared our findings about dog disciplining with findings about child disciplining. Siebenheller (1988, 1990) and Korzilius (1996) showed, in a large study about child-discipline in Dutch families, that the interaction between the personality of the parent and the characteristics of the situations resulted in differences in parental perceptions, emotions, cognitions and reactions during disciplining situations. Korzilius (1996) also established a model of 'main routes of parenting' in disciplinary situations that describes a dominant sequence of parental reactions that occur during the parent-child interaction: perception → cognition → emotion → behavior. Moreover, child disciplining frequently focuses on two main parental reactions: modification of non-compliance and internalization of the disciplinary process (Tricket and Kuczynski 1986; Siebenheller 1990; Korzilius 1996). These conclusions with children are similar to our results about dog disciplining. In situations where the child was frequently and clearly disobedient or impulsive, and when the parents wanted to achieve immediate control, power assertion reactions were mostly used. Korzilius (1996) found, in contrary to the present study, that emotions of anger and irritation were weaker predictors of power assertion behavior induced by child transgressions.

In addition, he found that the perception of the child as a victim increased encouraging, stimulating, and inductive behavior (control attempts which induce internalization of motivation based on reasoning) and diminished the power assertion behavior strategy. Inductive behavior affects the internalization process in children and has long-term effects on the child's behavior in problematic situations. Although there is no evidence of internalization processes in dogs, there is a similar effect from encouraging and helping behavior; it enables

## **An exploratory model of dog disciplining**

dog owners to modify certain behavior problems, such as fear and phobias in the long term (Askew 1996).

The results showed that the structures of the owners' perceptions, emotions, and behavioral reactions were comparable for all the owners; they were reasonably reliable and invariant. The owners perceived the situations from a very basic level by similar means, experienced emotions to a comparable degree, and showed similar behavioral responses.

Korzilius (1996), in studies of parents and children, suggested that there is a general invariability in the exploratory models that describe the disciplinary reactions of the parents in problematic situations with their children. There were, nevertheless, a variety of factors which could influence these reactions. For example, the sex of the parent, the family climate, or the parent's occupation caused some deviations in the exploratory models that described the relationships between the parental mental representations. Korzilius (1996) considered these deviations as a "coloring" of the relationships of the total group exploration model.

In the present study, the sex of the owner also influenced the perceptions of, and emotional and behavioral responses to, problematic situations with dogs. Because most of the owners in the total sample were female, it is a matter of course that the patterns of reaction and magnitude of effects in this group were similar to the total sample. However, in contrast to the total sample, female owners were affected slightly by dogs perceived to be showing aversive/offensive behavior. Aversive behaviors in circumstances of transgression are unacceptable with dogs, as they are with children. In fear arising situations, aversive/offensive dog behavior increases feelings of anger and reduces encouraging behavior. Nevertheless, one can conclude that female owners, though affected by the unpleasantness of the behavior, are also likely to perceive the dog as helpless or as a victim and therefore show encouraging behavior. This is in agreement with the findings of Korzilius (1996) who suggested that helplessness increases helping behavior in parents. Male dog owners, however, deviated in the complexity of the basic structure of the two models and in the magnitude of the path coefficients. Male owners seemed to be less affected by the perception of the dog as disobedient, and were more inclined than the female owners to let emotions of irritation and anger result in power assertion behavior. It is possible that the reaction of the male owners is affected by perceptions which are not measured in this study, or that some relationships are stressed differently by male owners. The reaction of the male owners was stronger than the female owners in both models.

These conclusions are in agreement with the results of Korzilius (1996) with children, and of Serpell (1998) with service dogs but are opposite to those of Ross and Willigen (1996). The



latter claim that the presence of children affects the level of anger parents experience in problematic situations. They also suggest that exposure to the strains associated with child care, and social inequality cause mothers and women to experience and exhibit higher levels of anger in parenting activities than do fathers and men.

In conclusion, the exploratory models of situation-specific owner mental representations display several characteristics. Firstly, some representations (i.e. perception of the dog as disobedient and fearful/submissive, the owner's emotional orientation of anger/irritation and compassion, and the behavioral responses of power assertion and encouragement) have a central function in the model. Secondly, the interpretation and generalization of the models in relation to gender should be carefully considered. However, we believe our results illustrate adequately some of the mechanisms involved in dog owner mental representations. Thirdly, there are some similarities between disciplining methods used on dogs and children.

### **Limitations**

The present study has to consider several limitations. Firstly, this study uses a questionnaire to assess the owners' emotions and behaviors and does not involve any observational work.

Therefore, the reported reactions may not be the actual reactions of the owner in a real situation. However, the study of Deković and Gerris (1992) indicated that reported behavior and observed behavior are reasonably correlated.

Secondly, the owners in this study were fairly homogenous (mainly belonging to middle and high socio-economic groups), which may have biased the results. Thirdly, this model tries to explain the behavior of more or less 'normal' owners in western society.

These exploratory models should be confirmed by studying other problematic situations and other groups of owners. Fourthly, there are some factors that can influence the choice of the behavioral response that are not discussed in the present study, such as the personality of dog owner (Siebenheller 1990; Korzilius 1996). For example, a warm-hearted person may bias the interaction with the dog by using less power assertion in situations where this reaction would otherwise be obvious. Future research should investigate how the personality traits of the owners, as well as the situation, influence behavioral responses.

## References

- Albert, A. and Bulcroft, K. 1987. Pets and their urban life. *Anthrozoös*. 1(1). 9–23.
- Askew, H.R. 1996. *Treatment of Behaviour Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Science.
- Ben-Michael, J., Korzilius, H. P. L. M., Vossen, J. M. H. and Felling, A. J. A. 2000. Disciplining behavior of dog owners in problematic situations: The factorial structure. *Anthrozoös*. 13(2). 104–112.
- Ben-Michael, J., Vossen, J. M. H., Felling, A. J. A. and Peters, V. A. M. 1997. The perception of problematic behaviour in dogs: application of multi-dimensional scaling and hierarchical cluster analysis. *Anthrozoös*. 10(4). 198–213.
- Borchelt, P. L. and Voith, V. L. 1985. Aggressive behavior in dogs and cats. *Compendium on Continuing Education for the Practicing Veterinarian*. 7. 949–957.
- Borchelt, P. L. and Voith, V. L. 1986. Dominance aggression in dogs. *Compendium on Continuing Education for the Practicing Veterinarian*. 8. 36–44.
- Cambell, W.E. 1986b. Effects of training, feeding, regiments, isolation and physical environment on canine behaviour. *Modern Veterinary Practice*. March 239–241.
- Clark, G. I. and Boyer, W. N. 1993. The effects of dog obedience training and behavioural counseling upon human–canine relationship. *Applied Animal Behaviour Science*. 37. 147–159.
- Deković, M. and Gerris, J. R. M. 1992. Parental reasoning complexity, social class and child rearing behaviours. *Journal of Marriage and the Family*. 54. 675–685.
- Dodman, N. H. 1999. *Dogs Behaving Badly. An A-Z Guide to Understanding Curing Behavioral Problems in Dogs*. Bantam Books.
- Fisher, J. 1993. A behavioural approach to training. In Fisher, J. (ed). *The Behaviour of Dogs and Cats*. London: Stanley Paul. 113–129.
- Fogle, B. 1990. *The Dog's Mind*. London: Pelham Books.
- Goodnow, J. J. and Collins, W. A. 1990. *Development According to Parents: The Nature, Sources and Consequences of Parents' Ideas*. London: Lawrence Erlbaum Associates.
- Hart, B. L. and Hart, L. A. 1985. *Canine and Feline Behavioral Therapy*. Philadelphia: Lea and Febiger.
- Jagoe, A. and Serpell, J. A. 1996. Owner characteristics and interaction and the prevalence of canine behaviour problems. *Applied Animal Behaviour Sciences*. 47. 31–42.
- Korzilius, H. P. L. M. 1996. *Mental representations of parenting. Structures of perceptions, cognitions, emotions, and behavioral responses in child-rearing situations*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Mallon, G. P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös* 6(1). 43–47.
- McBride, A. 1995. The human–dog relation-ship. In Robinson, I. (ed). *The Waltham Book of Human–Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford: Pergamon. 99–112.
- Melson, G. F. 1988. Availability of and involvement with pets and children: Determinants and correlates. *Anthrozoös*. 2. 45–52.
- Mitchell, R. W. and Hamm, M. 1997. The interpretation of animal psychology: anthropomorphism or behaviour reading? *Behaviour*. 134. 173–204.
- Netto, W. J. van den Borg F. A. and Siegers J. F. 1992. The establishment of dominance relationship in a dog pack and its relevance for the man dog relationship. *Tijdschrift voor Diergeneeskunde*. 11(7) (Suppl. 1). 51–52.
- O'Farrell, V. 1992. *Problem Dog – Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.

- O'Farrell, V. 1995. Effects of owner personality and attitudes on dog behaviour. In Serpell, J. (ed). *The Domestic Dog: Its Evolution, Behaviour, and Interactions with People*. 154–158. Cambridge: Cambridge University Press.
- O'Farrell, V. 1997. Owner attitudes and dog behaviour problems. *Applied Animal Behaviour Science*. 52. 205–213.
- Overall, K. L. 1997. *Clinical Behavioral Medicine for Small Animals*. St. Louis. MI: Mosby.
- Peachy, E. 1993. Problems with people. In Fisher, J. (ed). *The Behaviour of Dogs and Cats*. London: Stanley Paul. 104–112.
- Rogerson, J. 1993. *Preventing aggression*. In Fisher, J. (ed). *The Behaviour of Dogs and Cats*. London: Stanley Paul. 113–129.
- Ross, C. E. and Willigen van, M. 1996. Gender, parenthood, and anger. *Journal of Marriage and the Family*. 58. 572–584.
- Serpell, J. A. 1996. *In the Company of Animals: a Study of Human–Animal Relationships*. Cambridge: Cambridge University Press.
- Serpell, J. A. 1998. Perceiving and misperceiving guide dogs: reliability of behavioural survey data. *Paper presented at the ISAZ'98 conference, Prague, Czech Republic*. 10–12<sup>th</sup> September, 1998.
- Siebenheller, F. A. 1988. Problematische opvoedingssituaties: subjectieve percepties, affectieve belevingen en gedragingen van ouders (Problematic child-rearing situations: subjective perceptions, affective reactions and behaviours of parents). In Gerris, J. R. M. and. van Acker, J. (ed). *Gezinsrelaties Onderzocht*. Amsterdam/Lisse: Swets and Zeitlinger. 77–98.
- Siebenheller, F. A. 1990. *Problematische Opvoedingssituaties: Percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic Child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of Antecedents of Reactions of Parents in Every-day Child-rearing Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Smith, S. L. 1983. Interaction between pet dog and family members: an ethological study. In H.Katcher, A. and Beck, A. M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 29–36.
- Tricket, P. K. and Kuczynski, L. 1986. Children's misbehaviours and parental discipline strategies in abusive and nonabusive families. *Developmental Psychology*. 22. 115–123.
- Turner, D. C. 1997. Treating canine and feline behavioural problems and advising clients. *Applied Animal Behaviour Science*. 52. 199–204.
- Voith, V. L. 1983. Animal behavior problems: an overview. In Katcher, A.H. and Beck, A. M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia: University of Pennsylvania Press. 181–186.
- Voith, V. L., Wright, J. C. and Daneman, P. J. 1992. Is there a relationship between canine behaviour problems and spoiling activities, anthropomorphism and obedience training? *Applied Animal Behaviour Science*. 34. 263–272.

## Appendix 1.

Subgroup analysis: standardized regression solution that enables comparison between sex subgroups and total group. Correlations  $\geq |.26|$  (in bold) are considered to be significant at the 5% level (see Analysis)

### 1. 'Power assertion' model

Background variable	n	Path						
		P1- →E2	E2→R1	P1- →R1	P3+→E2	P3+→R1	E1→R1	E3→R1
<b>Sex owner</b>								
Female	656	<b>.47</b>	<b>.37</b>	<b>.37</b>				
Male	224	<b>.41</b>	<b>.52</b>	<b>.29</b>	-.12	.11	-.13	+.17
<b>Total</b>	880	<b>.45</b>	<b>.39</b>	<b>.35</b>				

### 2. 'Encouragement/comfort' model

Background variable	n	Path							
		P1+→E1	E1→R2	P1+→R2	P1+→E2	E2→R2	P2-→E2	P3-→E2	P2-→R2
<b>Sex owner</b>									
Female	656	.23	.23	.18	<b>-.47</b>	-.18	.11		
Male	224		<b>.36</b>	<b>.27</b>	<b>-.41</b>	-.18		.12	.11
<b>Total</b>	880	.18	<b>.28</b>	.19	<b>-.45</b>	-.20			

## **Chapter 5.**

### **Owners' dog-rearing attitudes, attachment, social support, and reactions to hypothetical problem situations involving their dogs**

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*Submitted to Society and Animals*

#### **Abstract**

*This study examines the relationships among dog owners' reactions to problem situations and owners' dog-rearing-related attitudes. In addition, this study investigates the ways in which these aspects relate to male and female dog owners. It also explores whether there are similarities between the relational behaviors of owners with their dogs and parents with their children pertaining to the effect of rearing-related-attitudes. Dog owners completed a 34-item questionnaire about satisfaction, burden, involvement/care, discipline/control, attachment to dogs, and social support. The data was analyzed by factor analysis and by multiple regression analysis. The findings show that the most important attitude influencing the reactions of dog owners is satisfaction with dog ownership. Male owners were to some extent, also affected by burden, attachment, and involvement.*

*Key words: Dogs, Behavior problems of dogs, Disciplinary behavior of dog owners, Attachment to dogs, Social support and dogs, and Attitudes regarding dog ownership.*

### Introduction

Although dogs traditionally were acquired to perform important practical functions, many modern people acquire a pet dog in the belief that the experience will be personally rewarding and that the animal will become a lifelong companion, best friend and protector (Askew 1996; Marston and Bennet 2003). Arluke and Sanders (1996) argued that companion animals, particularly dogs, are regarded as almost human and, although they are considered to be friends, are treated paternalistically as babies and there is a great deal of moral concern for their welfare. Furthermore, studies in the human-animal relationship argue that people turn to the companion animals living with them as a source of affection and, in contrast as beings over whom they can easily exercise dominance (Budiansky 1992; Arluke and Sanders 1996). The affectionate dominance provides owners with feelings of supremacy over nature and the power to involve the animals in their world (Birke 1994). Current studies on the subject of dog owner attitudes indicate that attitudes pertaining to dog ownership and the interpretation of the dog's behavior occurs within a particular psychological context that is similar to human context-in-context (Eddy et al. 1993; Askew 1996; Mitchell and Hamm 1997; Tenne 1998; Martson and Bennett 2003). In order to integrate the dog into an everyday, intimate, relational context, the dog owner often engages in communicative activities similar to those used in the interaction with children and frequently associates the dog with children in terms of relationships and disciplinary methods (Mallon 1993; Beck and Katcher 1996; Arluke and Sanders 1996; Askew 1996; Overall 1997; Mitchell and Edmondson 1999). Serpell (1986), McBride (1995), and Beck and Katcher (1996) proposed that dog rearing is comparable to the rearing of young children because it encompasses empathy for another living being, it demands responsibility for the care and awareness of the dog's needs and situation. It also requires dedication, understanding, and effort that last a (dog) lifetime. Askew (1996) claims that our pets display evolutionary modifications of ancestral behaviors that function to elicit human parental care. According to him the behavior of the pet owner not only resembles the parental behavior, but it actually is parental behavior directed towards members of other species. Through becoming involved in his dog, the owner minimizes the social boundaries between himself and dog. He develops an intense bond with the dog that is expressed often in attachment activities (Melson 1990; Siegel 1990; Weiss 1991; Franklin 1999) that provide comfort of physical and psychological proximity (Bowlby 1973, 1979; Ainsworth et al. 1978; Main et al. 1985). Dog rearing further presumes benefits of a special form of companionship (Bryant 1990; Endenburg 1995; Beck and Katcher 1996; McNicholas and Collis 2000a).

Descriptions of pet ownership often feature emotional and esteem support as elements of the relationship. The opportunity to provide nurturance and the need to be needed is also an important aspect of animal ownership (Collis and McNicholas 1998; Odendaal 2000). Dogs are considered responsible for improving the well-being of the owner by interacting with their owners far more frequently than other pets, by reducing loneliness, enhancing social interactions, offering intimate support in emotionally distressing situations, reducing stress, and contributing to a general sense of well-being and satisfaction (Cusak 1988; Bryant 1990; Friedman 1995; Hart 1995; Collis and McNicholas 1998; McNicholas and Colli 1998, 2000a,b; Wilson 1998). The companionship of a dog can contribute to the establishment of a supportive network that will, in turn, reduce stress and decrease the chance for loneliness especially when the human social support is reduced (Van Tilburg 1988; Sable 1991, 1995; Siegel 1990; 1993; McNicholas and Collis 1995; Collis and McNicholas 1998; Garrity and Stallones 1998; Wilson and Turner 1998; Franklin 1999).

Even when there is a predominantly gratifying interaction with the dog, incidents of disobedience or inappropriate behavior may occur. These frequently require disciplinary responses. Studies by Ben-Michael et al. (1997, 2000 a, b) confirmed that dog owners' interactions with their dogs in attempt to gain control over the dog in terms of perceptions, emotions, and disciplinary reactions are analogous to the ways in which parents interact with their children in attempting to gain control over the children (Siebenheller 1990; Korzilius 1996; Overall 1997).

Furthermore, research into child-parent interactions in problem situations finds that relational characteristics such as warmth, expressed affect, and conflict management, are present and influence the parent-child interaction in problem situations (Dunn 1993; Askew 1996). Siebenheller showed that in particular, the attitudes 'warmth', 'restriction', 'involvement concerning child-rearing', and 'granting autonomy' are strongly related to parental reactions (Siebenheller 1990; Korzilius 1996). Comparable attitudes are probably present in the owner-dog interaction in problem situations with the dog. This may influence the disciplinary reactions of the owner (Askew 1996; Beck and Katcher 1996). In view of this, we studied whether the immediate antecedents of owners' disciplinary attempts are also associated with the owner's perceptions of the problematic behavior, with the emotional reactions to this behavior, and with dog-rearing practices related attitudes.

Accordingly, the following issues were addressed:

1. What dog owner attitudes are related to dog-rearing practices in problem situations?

## Owners' dog-rearing attitudes

2. What are the relationships between *dog-rearing-related attitudes*, *attachment* and *social support* and emotional and behavioral reactions of the dog owner in problem situations?

Various studies of child-rearing practices and human-dog practices indicate that the sex of the parent/dog-owner is a relevant factor that influences the parent-child and owner-dog reactions in problem situations (Turner and Avison 1985; Siebenheller 1990; Korzilius 1996; Cramer and Neyedley 1998; Serpell 1998; Gardner et al. 1999; Ben-Michael et al. 2000a,b; Maccoby 2000). Consequently, the present study also considers whether the sex of the owner is a source of variation in the possible relationships among the owner's perceptions of, attitudes to, emotional and behavioral responses to, problematic situations with their dog. We addressed the following question:

3. To what degree is the sex of the owner a possible source of variation in the *dog-rearing-related attitudes*, *attachment*, and *social support*?

## Materials and methods

### Subjects

Dog-owner characteristics: 55 subjects self-selected dog owners voluntarily agreed to complete a questionnaire about their relationship with their dog in problem situations. The subjects who lived in the Eastern part of the Netherlands were contacted through notices in local and regional newspapers, university newspapers, and through appeals on local and regional radio stations. The selected group contained 75% ( $n = 41$ ) females and 25% ( $n = 14$ ) males. The average age was 46.7 years ( $SD = 12.11$ ). Seventy-five percent of the subjects had partners, 42% had children, and 51% had achieved education of college-level and higher. Fifty-one percent had earned more than the modal income.

Dog characteristics: the dogs were purebred as well as mixed breeds. The majority of the dogs were medium to large in size. The dog breeds included German Shepherds, Golden Retrievers, and Labradors. The mean age of the dogs ( $n = 55$ ) was 6.76 years ( $SD = 3.38$ ); 40% of the dogs were male and 60% were female. Most of the dogs (54.5%) were intact. Approximately 75% of the dogs had been owned for more than three years, while the remainder had been owned for between one and two years.

### Procedure

A Q-sort procedure to select hypothetical problem situations with the dog resulted in 16 prototypical hypothetical situations. A detailed description of the Q-sort procedure and the



analysis is outlined in Ben-Michael et al. (1997 – see chapter two). Each prototypical situation is a short description and always includes a problematic behavioral aspect. The selected situations were chosen because they were readily familiar and identifiable to the owners. An example of such a situation is:

**When visitors arrive, the dog (usually very quiet) barks and growls continuously.**

Subsequently, the 55 dog owners were asked to consider each of the 16 situations (see Table 1 chapter three), even if they had not experienced each situation in their own dog-rearing practice. They were asked to:

- a. Indicate the degree to which they experienced 13 emotions (disappointment, anger, annoyance, concern, irritation, compassion, powerlessness, anxiety, sadness, pity, acceptance, remorse, and shame) on a four-point scale (i.e. none, not so much, much, very much).
- b. Choose one to three applicable reactions from nine behavioral reactions (punish, address severely, demand compliance, be inactive, comfort, help, distract, ignore, reward). These reactions were based upon information that was collected previously from dog owners (who were not among the subjects of this study) and from literature about treatment of behavior problems of dogs (Voith 1983; Fogle 1990; O'Farrell 1992, 1994; Overall 1997).

A multidimensional analysis of the 16 prototypical situations resulted in three perception dimensions. These indicated that situations perceived as problematic could be categorized in six ways (two per dimension): P1(-) disobedient dog – P1(+) fearful/submissive dog, P2(-) aversive/offensive dog (e.g., destructive context, coprophagia) – P2(+) aggressive dog and, P3(-) uncontrolled dog (e.g., restless) – P3(+) sexual/mating behavior of the dog (for a detailed description see Ben-Michael et al. 1997 – see Chapter two).

The factors underlying the owners' emotional and behavioral reactions were assessed by means of factor analysis (Ben-Michael et al. 2000a – see Chapter three). Factor analysis of the 13 emotional reactions in the 16 problematic situations resulted in three factors: compassion/anxiety (E1), anger/irritation (E2) and compunction (E3) (indicating remorse and shame). The factor analysis of the nine behavioral reactions in the 16 problematic situations resulted in two factors. The first was power assertion (R1) which was characterized by a high loading on stern reactions of the owner. The second factor, encouragement/comfort (R2), loaded highly on the behaviors 'help' and 'distraction', which were aimed at comforting the

## **Owners' dog-rearing attitudes**

dog. The owners' responses to the problematic situations were differentiated into eight measurement scores, which were labeled as follows: perceptions: P1, P2 and P3; emotions: E1, E2 and E3; behavioral reactions: R1 and R2 (Ben-Michael et al. 2000a – see Chapter three).

## **Instrument**

Dog owners completed a 34-item questionnaire. Twenty-four items were used to assess self-reported dog-rearing-related attitudes. Ten items were used to assess attachment and social support.

The owners could indicate the degree to which the statements fitted on a five-point Likert-type scale: does not fit at all, does not fit, sometimes does not fit/sometimes fits, fits, fits closely. Tables 1, 2 and 3 contain (short) descriptions of the items.

The items concerning dog rearing practices and orientation were inspired by existing measures for parenting practices. We referred to the *Child Rearing Practices Report* (Block 1981; Siebenheller 1990; Gerris et al. 1993) for child rearing attitudes. The *Restriction scale* (Baumrind 1973; Siebenheller, 1990) was the source for degrees of restriction which parents apply in disciplining the child. The *Child Rearing Orientation Scale* (Vermulst and Gerris 1986; Siebenheller 1990; Gerris et al. 1993) provided information on the consequences of having a child in the life of the parent. Attachment was measured in terms of re-established proximity which increases feelings of security and pleasure in proximity to the dog (Bowlby 1969; Ainsworth 1989; Sable 1995). Social support was measured in terms of the degree to which dog owners report the need to share their emotions with others and to expect support from others for problems they experience in their personal domain (Van Tilburg 1988).

## **Unit of Analysis**

In order to show which mechanisms occur in dog-rearing situations and how attitudes affect the owner's reactions we related the owner's perceptions, emotions, and reactions to the owner's attitudes. The owner in the 'dog-rearing situation' is the basic unit of analysis in the present study. Consequently, the maximum sample size is  $55 \times 16$  situations = 880 units. Because it is unlikely that an owner's answer in one situation is independent of her/his answer in another situation, it is questionable whether the sample should be considered as 880 independent units. Significance levels of correlations and regression coefficients are likely to be overestimated. However, in assessing our findings, we used the critical value of a sample size of 55, i.e. correlations  $\geq |.26|$  at the 5% significance level. Therefore, by focusing on

substantive coefficients, we avoided the problem of overestimation. Consequently, we can assume that our conclusions correctly reflect the information collected.

In the present study, a factorial structure will be established by means of factor analyses on 34 items pertaining to owner dog-rearing-related attitudes, attachment, and social support. Subsequently, the eleven measures of situation-specific owner representations will be correlated, and we will try to determine by means of t-tests whether there are sex differences in attitudes, attachment, and social support. Next, the relationship of situation-specific attitudes, perceptions, emotions, and behavioral responses will be investigated. This exploration will be carried out by means of multiple regression analysis.

## Results

### Magnitudes of dog ownership related attitudes

With regard to dog rearing attitudes and the consequences pertaining to dog ownership, it appears that the most of the owners agree that having a dog is gratifying and it gives meaning to the owner's personal life. Furthermore, owners believe one has to show his love to the dog, for example, by petting and hugging him. Most of owners also agree that dog rearing is an every-day commitment one has to accept. Compliance is always required. Physical punishment and seclusion in situations of disobedience are mostly unnecessary (Table 1).

### Factors underlying dog-rearing oriented attitudes

A factor analysis was performed on the 24 items pertaining to dog-rearing practices and orientations. This was followed by a varimax rotation with Kaiser Normalization. A four-factor solution was determined for the attitudes that guide dog owners during dog-rearing situations (Table 1, Appendix 1). In total, 41% of the variance was explained by four dog-rearing attitudes frequently encountered in problem situations with dogs. Labeling was based on the highest loadings on the respective factor.

- *Burden* (10 items; explained variance: 16%): Cronbach's alpha = .76. This factor is marked by high loadings on dog-rearing attitudes which reflect a dog owner's sacrifices or altered plans. Moreover, the owner feels that the burden of commitment is heavy and even that it sometimes makes management his daily life impossible. These items possess, as with children, qualifications of burden and impediment of the owner's own development

## Owners' dog-rearing attitudes

(Gerris and Janssens 1987). Consequently, this factor was labeled as burden of the task or 'burden'.

- *Satisfaction* (six items; explained variance: 10%): Cronbach's alpha = .74. This factor is marked by high loadings for rearing practices that describe the contentment and fulfillment a dog can give to his owner. The owner is satisfied with his dog, feels that the dog is an addition to his life, and that the dog may be loved and trusted. Further, the responsibility of dog ownership is rewarding to the owner and fosters positive feelings (Rook 1990).
- *Discipline/control* (four items; explained variance: 8%): Cronbach's alpha = .75. This factor is characterized by high loadings for actions caused by the dog's misbehavior. The owner is predisposed to correct unwanted behavior context, for example, by setting rules for conduct.
- *Involvement/care* (four items: explained variance: 7%): Cronbach's alpha = .69. This factor describes owners willing to subordinate themselves to a great extent to the dog's well-being.

Additionally, we performed two factor analyses, one on the items pertaining to attachment (five items) and one on social support (five items) (Table 3 and Table 4, Appendix 1).

- *Attachment* (Table 3) to the dog (five items: explained variance: 35%): Cronbach's alpha = .71. This factor describes the presence of feelings of attachment to the dog and actions that can be related to 'attachment'. In this questionnaire, we consider attachment as the need for proximity and contact which a dog can provide.
- *Social support* (Table 4) with other persons (five items; explained variance: 55%): Cronbach's alpha = .62. This factor describes the need to affiliate with other persons, (Van Tilburg 1988), emotional support, network support, and instrumental support (Collis and McNicholas 1998).

**Table 1.** Percentages of dog owners (N=55) who believe in a particular rearing attitude that is related to dog ownership.

Dog rearing attitudes	Owner attitudes in dog-rearing situations (percentages)				
	Entirely agree	Agree	Does not agree/ does not disagree	Disagree	Entirely disagree
Dog rearing is a heavy burden	0	5	5	49	40
Dog rearing is a difficult task	0	4	9	<b>56</b>	31
Dog rearing is giving up things	0	22	24	34	20
Dog rearing is adjustment of own plans	2	4	25	40	29
Owner denies the dog pleasures when he misbehaves	2	5	14	38	40
Dog rearing is the greatest task one can wish	2	20	36	36	5
Owner secludes dog that misconducts	0	11	9	20	<b>60</b>
Dog rearing is an everyday commitment	23	<b>50</b>	19	7	0
Owner shows love by petting, and hugging the dog	38	47	11	4	0
Dog rearing means it is impossible to manage daily life	2	24	18	36	20
Dog rearing is gratifying to owner's personal life	29	31	25	7	7
Dog rearing is the greatest responsibility one can have	2	20	36	36	5
Dog rearing is a gratifying conversation subject	7	40	25	24	4
Dog rearing gives life a meaning	2	18	24	47	9
Dog's life is easier when he has a stable routine	25	<b>56</b>	11	7	0
Dog disciplining is a task that the owners has to accept	2	32	24	24	18
Owner does not permit the dog to disregard his commands	27	44	24	6	2
Dog must obey under any circumstances	<b>50</b>	46	4	0	0
Dog obeys the owner always	27	42	24	5	2
Owner punishes the dog physically if he disobeys	5	5	33	36	20
Dog rearing means that the dog's well-being comes prior to the owner's well-being	11	11	27	45	5
Dog rearing is subordination the owner's interests to these of the dog	7	16	29	41	5
Dog rearing is first taking care of the dog and before taking care of oneself	4	22	45	27	2
Dog rearing is re-experiencing child rearing	4	24	47	18	7
Mean %	11	25	22	27	14

**Table 2.** Factor structure of items measuring dog related-rearing-attitudes ( $N = 55$ ). Factors loadings  $\geq |.30|$  are presented; varimax solution.

Description of items	Factor Burden	1 Factor 2 Satisfaction	Factor 3 Discipline/control	Factor 4 Involvement/care
Dog rearing is a heavy burden	.72			
Dog rearing is a difficult task	.67			
Dog rearing is giving up things	.60	-.33		
Dog rearing is adjustment of own plans	.60			
Owner denies the dog pleasures when he misbehaves	.58			
Dog rearing is the greatest task one can wish	-.40			
Owner secludes dog that misconducts	.40			
Dog rearing is an everyday commitment	.38		-.32	
Owner shows love by petting, and hugging the dog	-.36			
Dog rearing means it is impossible to manage daily life	.32			
Dog rearing is gratifying to owner's personal life		.75		
Dog rearing is the greatest responsibility one can have		.73		.32
Dog rearing is a gratifying conversation subject		.60	.34	
Dog rearing gives life a meaning		.58		
Dog's life is easier when he has a stable routine		-.43		
Dog disciplining is a task that the owners has to accept		-.42		
Owner does not permit the dog to disregard his commands			.84	
Dog must obey under any circumstances			.72	
Dog obeys the owner always			.63	
Owner punishes the dog physically if he disobeys			.50	
Dog rearing means that the dog's well-being comes prior to the owner's well-being				.83
Dog rearing is subordination the owner's interests to these of the dog				.72
Dog rearing is first taking care of the dog and before taking care of oneself				.54
Dog rearing is re-experiencing child rearing				.40
<b>Explained variance</b>	<b>16%</b>	<b>10%</b>	<b>8%</b>	<b>7%</b>

**Table 3.** Factor structure of items measuring attachment ( $N = 55$ ).

<b>Description of items</b>	<b>Factor Attachment</b>
Dog sleeps in owner's bedroom	.72
My dog and I are together a lot	.68
I am attached to my dog	.57
My dog sleeps in my bed	.49
My dog is a family member	.43
<b>Explained variance</b>	<b>35%</b>

**Table 4.** Factor structure of items measuring social support ( $N = 55$ ).

<b>Description of items</b>	<b>Factor Social support</b>
Feelings are my own business	.91
I watch out when telling my problems	.84
I try to deal with sorrow on my own.	.76
I prefer keep emotional problems to myself	.69
I want to share my feelings	-.40
<b>Explained variance</b>	<b>55%</b>

### **The effect of attitudes on the owner's emotions and disciplinary responses during problematic situations**

The four measurement scores of dog-rearing-related attitudes: burden (B), satisfaction (S), discipline/control (D), involvement/care (IC), and attachment (A) to the dog, social support (SS) as well as perceptions disobedience-fear/submission: P1; aggression-aversive/offensive behavior: P2; 'sexual' behavior-uncontrolled: P3, emotions (compassion/anxiety:E1 and anger/irritation: E2) and behavioral reactions (power assertion: R1 and encouragement/comfort: R2) were correlated. The results are shown in Table 5.

No statistically significant correlations were found between the attitudes, attachment to the dog, social support, and the perception of the problem situations. This means that as far as this study concerns we have not found any empirical evidence for the existence of relationships between dog-rearing-related attitudes and the perceptions of problem situations. The correlations in Table 4 show that satisfaction is the only attitude that is correlated to one of the owner's reactions, namely, encouragement/comfort.

By means of multiple regression analyses (method stepwise), we examined whether the behavioral strategies of the dog owners are related, not only to perceptions and emotional

## Owners' dog-rearing attitudes

orientations (as described in Ben-Michael et al. 2000b –see chapter four), but also the dog owner attitudes.

**Table 5.** Pearson correlations of eleven measures of situation-specific owner representations.

	E1	E2	E3	R1	R2	B	S	D	IC	A
<b>E2</b>	.00									
<b>E3</b>	.12	.10								
<b>R1</b>	-.03	<b>.54</b>	.13							
<b>R2</b>	<b>.31</b>	<b>-.29</b>	.00	-.10						
<b>B</b>	-.14	.06	.03	-.05	-.10					
<b>S</b>	.04	-.08	-.14	.08	.27	-.04				
<b>D</b>	.00	-.04	-.11	.04	.08	.00	.02			
<b>IC</b>	-.04	.05	-.03	.01	-.06	-.04	.05	.00		
<b>A</b>	-.07	.04	.08	-.04	-.11	.21	<b>.31</b>	.03	.07	
<b>SS</b>	-.13	.03	.04	-.04	-.06	.20	.04	.17	<b>.40</b>	.20

*Note: Correlations  $\geq .1261$  (in bold) are considered to be significant at the 5% level (see Unit of Analysis). E1: compassion and anxiety; E2: anger and irritation; E3: compunction; R1: power assertion; R2: encouraging behavior. B: burden; S: satisfaction; D: discipline/control; IC: involvement/care; A: attachment; SS: social support.*

The owner's behavioral responses to problematic situations may be a direct effect of the owner's attitudes (Attitude → Response) or may be mediated by emotions which emerge as a result of an attitude (Attitude → Emotion → Response).

In the multiple regression analyses the following variables were involved:

- The attitudes burden (B), satisfaction (S), discipline/control (D), involvement/care (I/C), attachment to the dog (A) and, social support (SS).
- The perceptions: disobedient dog (P1-); fearful dog (P1+); aversive dog behavior (P2-); offensive-aggressive dog behavior (P2+); uncontrolled dog behavior (P3-); 'sexual'/mounting dog behavior (P3+).
- The emotional orientations: compassion/anxiety (E1), anger/irritation (E2) and compunction (remorse/shame) (E3).
- The behavioral responses: power assertion (R1) and encouragement/comfort (R2).

Statistically significant predictors are shown in Table 6.

The most important attitude important attitude to explain the owner's behavioral reaction is satisfaction (S). Satisfaction was important for the prediction of encouragement/comfort (R2) and not important for the prediction of power assertion (R1) and the emotional reactions. We had no empirical evidence that the dog-rearing-related attitudes attachment (A) or social support



(SS) predict the dog-owner's perceptions of problem situations and the emotions of anger/irritation (E2).

**Table 6.** Results of the multiple regression analysis for the total sample.

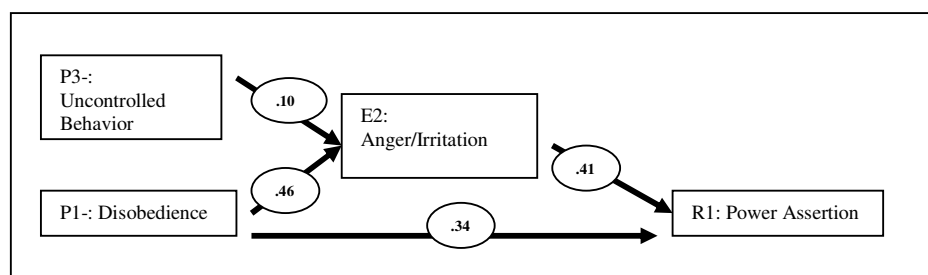
Variable	adj.R <sup>2</sup>	(df)	F-value	Important predictors (in order of beta-weights)	Less important predictors	Predictors not in the model
R1 Power Assertion	.42	7, 856	90.66	E2, -P1		S
R2 Encouragement/comfort	.24	7, 856	42.00	E1, P1, S, E2	-P3	
E1 Compassion/anxiety	.06	3, 860	20.63	P1		-B, -SS
E2 Anger/irritation	.21	4, 859	59.57	-P1	-P3	
E3 Compunction	.03	3, 860	9.60			-S, -D

*Note:* All models significant  $p < .05$ . A negative sign (-) before a predictor means that it had a negative beta-coefficient. Regression method: stepwise. S: Satisfaction; D: Discipline/Control; SS: Social support. Criterion used for less important predictors: beta-weight of less important predictors was at least twice as small as the lowest beta-weight of the other predictors.

For a more comprehensive description of the factors affecting reactions of dog owners' in problem situations, we looked into the effects of these attitudes on the relationship with the dog according to the two most significant models that could be extracted from the data concerning the behavior modification strategies of dog owners in problematic situations: power assertion model and to the encouragement/comfort model. These two models account for the emotional and behavioral reactions of the dog owner in problematic situations and are described by Ben-Michael et al. (2000b – see Chapter four); see Figure 1 and Figure 2, respectively.

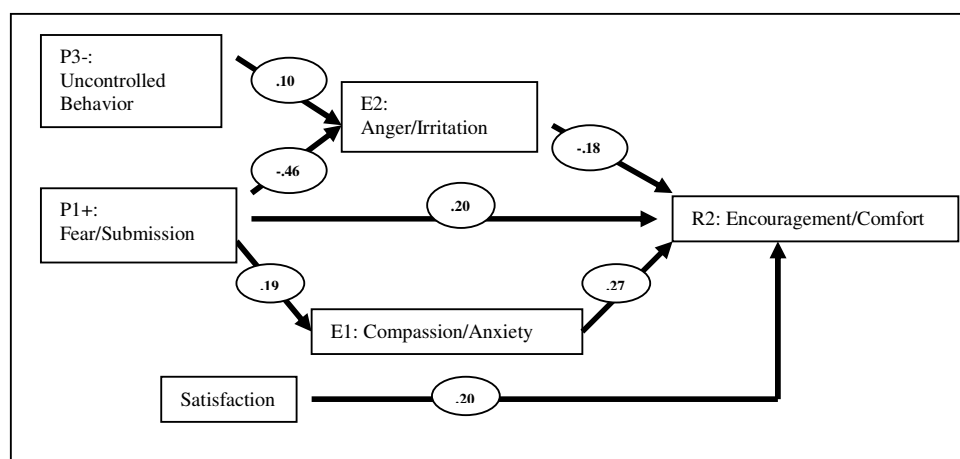
**‘Power Assertion’ model** (Figure 1): The perception of the dog as disobedient (P1-) predicts the emotional orientation of anger/irritation (E2) that leads to the use of power assertive behavior (R1). This model resembles the model for power assertion described by Ben-Michael et al. (2000b). No empirical evidence was found that the owner's perceptions about the problem situation, the emotions, and the behavioral response were either affected by, or, related to, the attitudes considered in the present study.

**Figure 1.** Power Assertion model of dog owner attitudes and characteristics in problematic behavior situations: the whole sample. Standardized regression coefficients ( $N=880$ ).



**‘Encouragement/Comfort’ model** (Figure 2): In this model, the only attitude that can explain the response of the dog owners to some extent is satisfaction (+.20, direct effect) Furthermore, no empirical evidence was found that perceptions and emotions of the owner concerning the problem situations with the dog were either affected by, or, related to, the attitudes studied here.

**Figure 2.** Encouragement/Comfort model of dog owner attitudes and characteristics in problematic behavior situations: the whole sample. Standardized regression coefficients ( $N=880$ ).



In conclusion, pertaining to the whole sample, satisfaction (S) is the only attitude that predicted the behavioral reaction: encouragement/comfort (R2). The effects of burden (B) and social support (SS) on compassion/anxiety (E1), and satisfaction (S) and discipline/control (D) on compunction (E3) were very small and not included in the models.

### Male and female owners and owner attitude effects

The present study also addressed the question of whether female or male dog owners deviate from the whole group in attitudinal effects influencing the reactions of the owner in problem situations. An earlier study of Ben-Michael et al. 2000a,b (see chapters three and four), showed that although there were no large differences between the models generated by sex and those from the total group the sex of the owner produced some differences in the underlying structures and mechanisms describing the dog-owner relationship in problem situations.

In this study, we found that the differences between men and women were found in satisfaction (S), attachment (A), burden (B) and social support (SS). The male owners had higher scores on satisfaction (S) and attachment (A) than the female owners ( $t_{(588,5)} = 6.21$ ,  $p < .001$ ;  $t_{(590,7)} = 10.06$ ,  $p < .001$ , respectively). The female owners had higher scores on burden (B) and social support (SS) than the male owners ( $t_{(580,1)} = 3.52$ ,  $p < .001$ ;  $t_{(470,1)} = 3.23$ ,  $p < .01$ , respectively). Female and male owners did not differ in discipline/control (D) of the dog and involvement/care (IC).

Further, this study investigated the relationships between the situation-specific perceptions, emotions, and behavioral responses to owner attitudes in relation to the sex of the owner. This was carried out by means of multiple regression analysis (method stepwise). The significant predictors for the various model analyses are described in Table 7 (see Appendix 2).

**Table 7.** Results of the multiple regression analysis for male and female owners.

Variable	Sex	adj.R <sup>2</sup>	(df)		F-value	Important predictors (in order of beta-weights)	Less important predictors	Predictors not in model
R1 Power assertion	m	.48	5,	218	41.45	E2, -P1, E3, -E1	-P3	
R1 Power assertion	f	.43	7,	632	68.78	E2, -P1		S, D
R2 Encouragement/ comfort	m	.31	4,	219	26.10	E1, P1, S, -E2		
R2 Encouragement/ comfort	f	.21	6,	639	28.50	E1, P1, S, -E2		
E1 Compassion/anxiety	m	.09	2,	221	12.33	S, -B		
E1 Compassion/anxiety	f	.09	3,	636	22.35	P1		-SS, -B
E2 Anger/irritation	m	.24	2,	221	35.38	-P1,	-P3	
E2 Anger/irritation	f	.21	4,	635	43.84	-P1	-P2	-S
E3 Compunction	m	.13	3,	220	11.96	-A, -IC		-SS
E3 Compunction	f	.04	3,	636	10.35			-S, -D,

*Note: All models significant  $p < .05$ . A negative sign (-) before a predictor means that they had a negative beta coefficient. Method: stepwise; S: satisfaction; B: burden; D: discipline/control; IC: involvement/care; SS: social support; A: attachment; m: male; f: female. Criterion used for less important predictors: beta-weight of less important predictors was at least twice as small as the lowest beta-weight of the other predictors.*

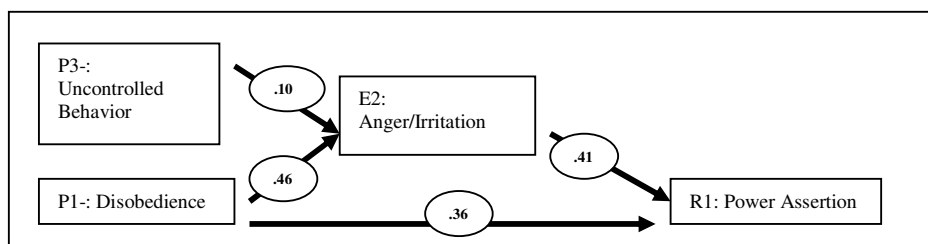
The foremost attitude that predicts both male and female owners reactions in problematic rearing situations are satisfaction (S) and burden (B). They predict the reactions of encouragement/comfort (R2) of male and female owners and emotions of compassion/comfort (E1) of the male owners. Further, attachment (A), and involvement/care (IC) also predict emotions of compunction (E3) of the male owners. We had no empirical evidence that dog-rearing-related attitudes, attachment, or social support predict the male and female dog-owner's perceptions of problem situations, the emotions of anger/irritation (E1), and the power assertive behavior (R1). For a more comprehensive description of the factors affecting reactions of the male and female dog owners in problem situations, we investigated whether these attitudes produce separate effects with the dog in the male and female groups. We used the

## Owners' dog-rearing attitudes

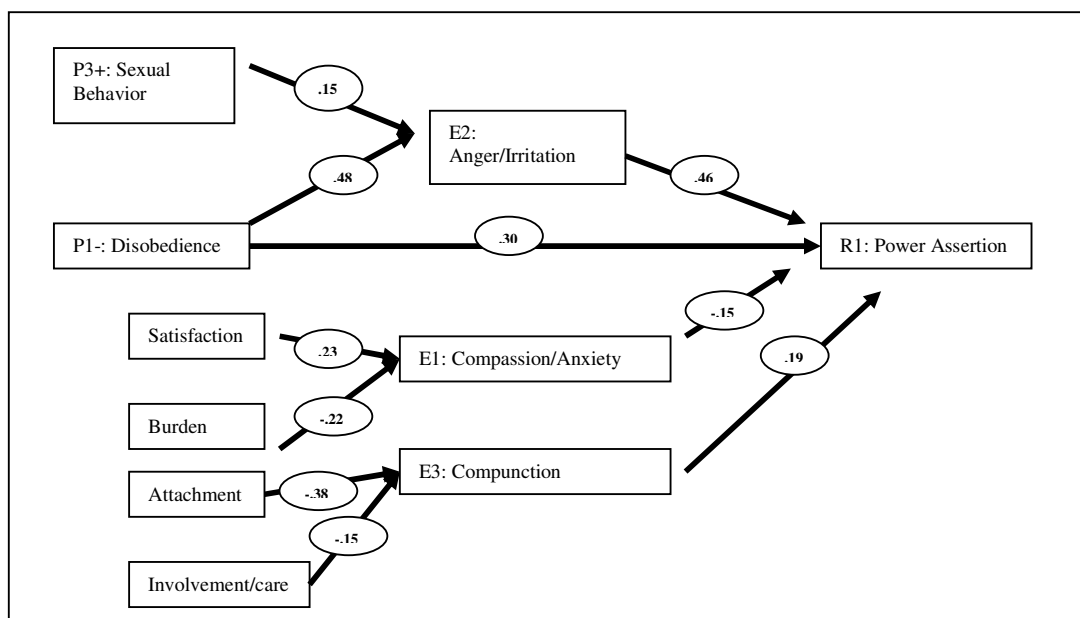
'Power assertion' model and the 'Encouragement/comfort' model earlier described by Ben-Michael et al. (2000b – see Chapter four). These two models account for the emotional and behavioral reactions of the dog owner in problematic situations with the dog.

**'Power Assertion' model':** There is a basic path structure shared by both female and male owners: disobedient dog (P-) triggers feelings of anger and irritation (E2) that in turn activate power assertive responses (R1). For both male and female owners we did not find any associations among the perceptions of the owners of the problematic situations and dog-related attitudes, attachment and social support. The size of the basic structure in the male and female groups is similar. We found no empirical evidence for the effect of dog-rearing-related attitudes, attachment, and social support on the female owner's power assertive reactions.

**Figure 3.** Power Assertion model of dog owner attitudes and characteristics in problematic behavior situations: female owners. Standardized regression coefficients ( $N = 656$ ).



**Figure 4.** Power Assertion model of dog owner attitudes and characteristics in problematic behavior situations: male owners. Standardized regression coefficients; ( $N = 224$ ).

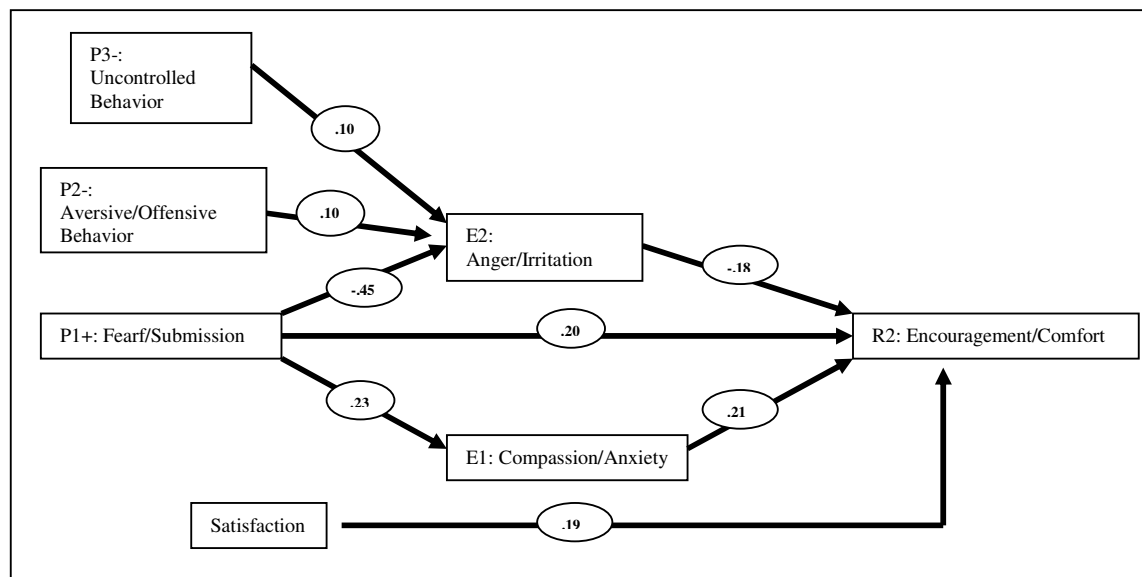


Male owners on the contrary, showed a somewhat more complex structure pattern. Their emotional response is, contrary to female owners, to some extent, affected by involvement/care, burden, satisfaction, and attachment. Attachment and involvement/care reduced in the male owners compunction (-.38 and -.15, respectively) and subsequently the power assertive reactions. Satisfaction intensified compassion (+.23) and decreased power assertion whereas burden decreased compassion (-.22) and increased power assertion. These effects are described in Figures 3 and 4 and in Appendix 2.

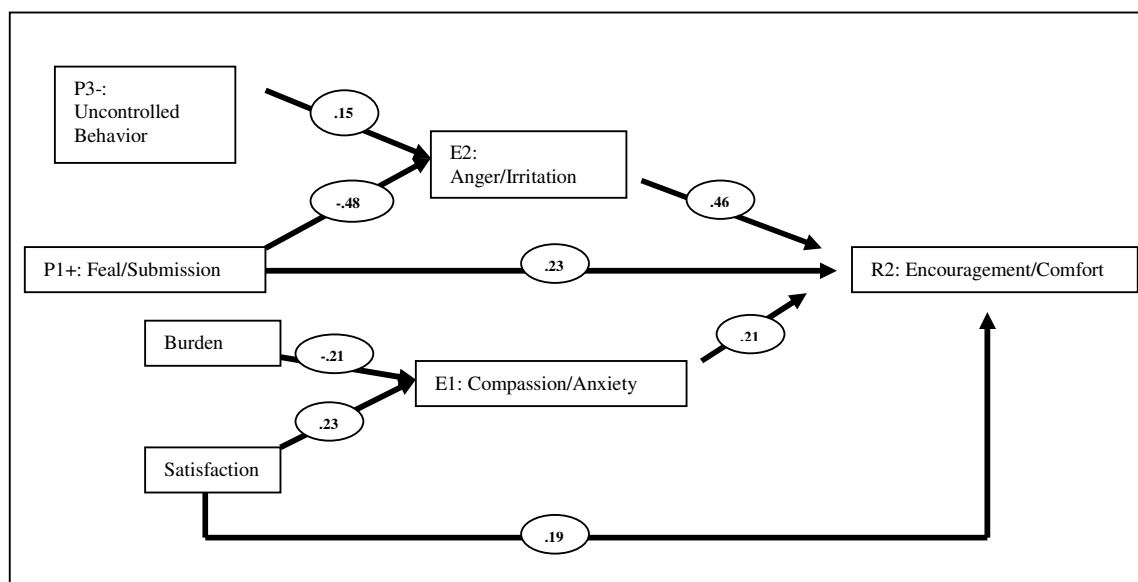
**‘Encouragement/Comfort’ model:** Female and male owners shared a similar basic path structure: The perception of a fearful dog (P1+) sets off feelings of compassion/anxiety (E1) and anger and irritation (E2) that in turn trigger encouragement/comfort reactions (R2).

For both male and female owners we did not find any empirical evidence pertaining to associations among the perceptions of the owners of the problematic situations and dog-rearing-related attitudes, attachment and social support. Satisfaction intensified encouragement/comfort responses in female and in male owners (+.17 and +.19, respectively) and intervening through compassion and anxiety with the male owners (+.23). Further, burden decreased encouragement/comfort only in the male owners group by intervening through feelings of compassion and anxiety (-.21). These effects are described in Figures 5 and 6 and in Appendix 2.

**Figure 5.** Encouragement/comfort model of dog owner attitudes and characteristics in problematic behavior situations: female owners. Standardized regression coefficients ( $N=656$ ).



**Figure 6.** Encouragement/comfort model of dog owner attitudes and characteristics in problematic behavior situations: male owners. Standardized regression coefficients ( $N=224$ ).



In conclusion, pertaining to the male and female samples, satisfaction (S) is the only attitude that predicted encouragement /comfort (R2). The effects of social support (SS) and burden (B) on compassion/anxiety (E1), satisfaction (S) on anger/irritation, and discipline/control (D) on compunction (E3) with the female owners were very small and not included in the models. In addition, the effects of social support (SS) on compunction (E3) with the male group were too small to be included in the models.

## Discussion

The present study investigated the possible effects of dog owners' attitudes related to dog ownership which influence the emotions and the disciplinary strategies in problem situations with the dog.

The current study was based on the previous studies of Ben-Michael et al. (1997, 2000 a,b) who discussed the effect of perceptions and emotions on the disciplining methods in problem situations with the dog. According to the models suggested by Ben-Michael et al. (2000 b) the perception of the dog as disobedient and fearful/submissive, the owner's emotional orientation of anger/irritation and compassion/anxiety, and the behavioral responses of power assertion and encouragement/comfort have a central function. Power assertive responses and feelings of anger/irritation occurred frequently in situations in which the dog was perceived as

disobedient. Encouragement/ comfort and feelings of compassion/anxiety, often combined with anger/irritation, occurred regularly in situations in which the dog was perceived as fearful.

Research with children has shown that parental attitudes (such as being affective and satisfied with parenthood, restrictiveness and involvement) contribute to the parenting behavior in child-rearing situations (Belsky 1984; Fazio 1986; Siebenheller 1990; De Brock 1994; Korzilius 1996; Gerris et al. 1997; Fazio et al. 2000; Korzilius et al, 2001).

Following the line of parent-child studies, we attempted in the present study to explore whether dog-rearing-related attitudes, attachment and social support, affect the owner's perceptions of the situation, and his emotional and disciplinary responses in problem situations with the dog. First, we explored which attitudes were related to dog-rearing practices in problem situations. We found four major factors that represent attitudes having an effect on the dog owners' reactions in problematic situations: burden, satisfaction, involvement/care and discipline/control. Second, we investigated the relationships among these dog-related attitudes, attachment and social support, and the dog owner's perceptions and emotional and behavioral reactions in problematic dog rearing situations.

The findings of this study have not revealed any associations among the perceptions of the problematic situation with the dog and the attitudes related to dog ownership. Furthermore, we also could not prove that any of these dog-related attitudes are involved directly in the use of power assertion. We can, therefore, infer that, regardless of the owner's attitude towards the dog, power assertion is, in problem situations, an instant reaction that requires the establishment of short-term control over the dog's behavior and its immediate compliance and is therefore less dependable on dog-rearing-related attitudes. This is also indicated by the findings of Askew (1996) who suggested power assertion is effective in the sense of immediately stopping the unwanted behavior and suppressing it temporarily, but its effects are short-lived.

For example, growling and barking at strangers is, regardless to how much the owner is attached to his dog, or how satisfied he is with the dog, frequently scolded or otherwise punished with enough severity that the dog immediately ceases his unwanted/inappropriate behavior.

Also, studies in child discipline suggest that power assertion seems to be effective for immediate behavioral control (Kuczynski 1984; Maccoby 1992; Gardner et al. 1999). Contrary to power assertion, encouraging/comforting responses are intensified by the attitude satisfaction. The employment of the encouragement/comfort response occurs mostly in situations in which an immediate behavior modification is impossible. For example, the modification of phobic or anxious behavior in a dog is a process not resolved through an immediate action of the owner.

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An attitude such as satisfaction can then facilitate an adequate response to the dog in problem situations. The owner who is satisfied with his dog may be more willing to be patient with the dog's behavior in a perceived fearful situation for the dog, to engage in various actions in order to alleviate the dog's distress, and, occasionally, to modify his own behavior. Furthermore, we found evidence that for the most part in these situations male owners' emotions of compassion/anxiety function as an intermediary to satisfaction and burden to affect the behavior modification strategy of encouragement/comfort. If the dog poses an inconvenience for the male owner and if the dog is considered as an impediment and burden, emotions of compassion/anxiety and the behavioral reaction of encouragement/comfort will decrease, respectively. However, satisfaction can, in situations where the dog is distraught and fearful, increase the feelings of compassion/anxiety and the willingness of the male owner to comfort the dog in distress.

Third, the present study also addressed the question whether the influences of the dog-rearing-related attitudes, attachment and social support, vary between male and female subgroups of dog owners. The evaluation of our results must take into account several considerations. First, it seems that, for both male and female owners, there is shared basic structure comprising the perception of the situation (i.e., disobedient dog, fearful dog), emotions (i.e. anger/irritation, compassion/anxiety), and behavior modification strategies (i.e., power assertion, encouragement/comfort). Second, the male owners deviated to some extent in the complexity of the structure of the 'power assertion model' and 'encouragement/ comfort' and in the attitudes affecting the emotional and behavioral responses in problematic situations with the dog (Ben-Michael et al. 2000b). However, it is important to keep in mind that the group of male owners is not as large as the group of female owners. Therefore, the results of the male group are tentative and should be considered with caution.

Satisfaction played a major role by intensifying encouraging and comforting responses in both groups and by reducing the power assertive responses of the male owners. Burden, on the other hand, affected the feelings of compassion only the male owners for both power assertive and encouraging/comforting models. The results imply that regardless the perception of the situation, disobedient dog or fearful dog, male owners who consider the benefits of ownership as outweighed by the liabilities or problems of that ownership, turn out to be less sensitive and compassionate and to use more power assertion in situations of a disobedient dog or less comforting/encouraging reactions in situations of a perceived fearful dog. These results are in agreement with the studies of Miller et al. (1996); Patronek et al. (1996); Lane (1998) and Marston and Benett (2003). They suggested that when the amount of effort required in caring for



the dog exceeds the owner's expectations then the risk that the dog becomes a burden increases, as well as the tendency to relinquish the dog to animal shelters.

Furthermore, we found that the misbehavior of the dog might trigger in the male owners feelings of compunction. It means that owners may consider the dog in situations in which it is perceived as disobedient as blameworthy and guilty, resulting in punishment. Rasmussen and Rajecki (1995); Rajecky et al. (1998); Rajecky et al. (1999) proposed that the inappropriate behavior of the dog might be considered by the owner as intentional raising the possibility that the animal itself might be held psychologically accountable to some extent for the presumed misbehavior which results in punishment. However, this study showed that male owners high in attachment and involvement/care reduced feelings of compunction and consequently the power assertive reactions. This is in agreement with the conclusions of Rajecky et al. (1999) who suggested that there are situations in which dog owners are most likely high on excuse for the dog's actions, may consider the defiant dog as having low intent, its misbehavior as not internal and controllable, indicating that the dog simply acted instinctively and therefore should not be held accountable for the transgression. Rajecky et al. (1999) called this attitude the 'pet-positivity dimension': a predisposition assuming that any given dog is a good dog which can explain the leniency shown by owners towards the misbehavior of a dog, at least for mild misdemeanors.

We could not detect any effect of compunction feelings in female owners. Apparently, these differences can be a result of sex-specific interpretations of the situation (Knight et al., 2004). This conclusion is in agreement with Kafer et al. (1992) and Lago (in Wilson and Turner 1998) who suggested that there are cohort and gender differences in self-report of affection for pets. People who differ widely in how much they like pets can still find a variety of alternative paths to high-level quality of life. According to them people, even high in self-report affection for pets, may differ widely in how much they like pets, and in the activities, they engage in expressing this affection.

### **Comparison with research about child-rearing and discipline**

Because owners frequently consider their dogs to be a part of the family or even a child (Mallon 1993; Askew 1996; Beck and Katcher 1996; Serpell 1996), we compared our findings on the effect of attitudes on dog discipline with those on child discipline. Inconsistent with the assertions of Fazio (1989) and Fazio et al. (2000) in human studies, we were not able to show that the dog-rearing-related attitudes examined in this study, attachment and social support, predict, or are related to, the owner's perceptions of problematic dog-rearing situations. Our

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findings are also inconsistent with the findings of Siebenheller (1990), who found that reactions of parents are influenced by their perception of the situation as well as by their attitudes.

Research with children has shown that parental attitudes such as affection, restrictiveness, satisfaction or involvement, contribute to parenting behavior in problem situations with the child (Belsky 1984; Fazio 1986; Siebenheller 1990; De Brock 1994; Korzilius 1996; Gerris et al. 1997; Borenstein et al. 1998; Fazio et al. 2000). In studies on child discipline, Siebenheller (1990) and Korzilius (1996) found, that situational characteristics as well as personal characteristics (attitudes) of the parents appeared to be important antecedents of parental reactions in problematic child-rearing situations. They claimed that reactions of the parents are influenced by their perception of the problem situations with the child as well as by their emotions, (and cognitions – Korzilius 1996), and by the attitudes that parents have toward child misbehavior and discipline.

In the present study, we found that the attitude satisfaction appears to be the foremost attitude affecting responses of encouragement and comfort. Research with children also showed that satisfaction and 'warmth' affect the reaction of the parents with the child in situations of distress. However, they also showed that highly affective and satisfied parents do not prevent the use of punitive disciplinary methods in order to establish short-term control over behavior and immediate compliance (Kuczynski 1984; Gardner et al. 1999). Siebenheller (1990) even suggested that highly affective parents might use power assertive responses in order to protect and to maintain the existing relationship with the child. The present study can support this findings only partially. Though in situations with dogs satisfaction is a predictor to both behavior modification strategies (power assertion and encouragement /comfort) in dog disciplining, we could not empirically establish a significant path effect on power assertion.

Finally, unlike problematic situations with children (Siebenheller, 1990), we found no evidence that owner belief in discipline and control actually affects the owner's reactions in problematic situations with the dog.

In conclusion, the results of this study show that the emotional and behavioral reactions of the owners described in this study are affected mainly by satisfaction and to some extent in the male owners also by burden, involvement/care and attachment.

- a. We could establish that dog-rearing-related, attachment and social support are antecedents predicting the dog owner's reactions. However, we could not establish that these antecedents are related to the use of power assertion. We could confirm that satisfaction directly affects the use of encouragement/comfort reaction. Satisfaction affects the owner's encouraging / comforting reactions and in the male owners power assertive reactions, indirectly by

affecting emotions of compassion and anxiety. The effects of satisfaction are similar to the effects of parental affection in problem situations with the child.

- b. The interpretation and generalization of the results in relation to sample size and the sex of the owner should be carefully done. Nevertheless, these preliminary findings suggest the existence of relationships among various aspects of a problematic situation with a dog and the owner's attitudes pertaining to dog ownership. Moreover, we believe that there is an indication that dog-rearing-related attitudes have an additive effect on the owner's reactions.

### **Limitations of the study and future research**

The present study has several limitations.

The results of this study may be limited. This study uses a questionnaire to assess the owner's disciplinary practices and orientations regarding their dogs. We must bear in mind that interpretation of the dog behavior may be biased by the owner's attitudes and expectations from the dog. Korzilius (1996) also asserted that enduring parental values and attitudes might bias parental interpretations of child behavior and the way in which parents respond. Parents will adjust their reactions in problem situations with the child according to their own ideas or needs. For example, the factor 'social support' may be biased if subjects do not admit their real feelings about loneliness and their need for proximity to others (Cramer and Needly 1998).

Furthermore, the groups were rather homogeneous: dog owners mainly belonging to middle and high socio-economic groups. The effect of dog-rearing-related attitudes and factors such as attachment and social support, as well as the opinions pertaining misbehaving dogs, may vary in the different socio-economic groups. For example, even people who score high on measures of affection and satisfaction of pet ownership still differ in daily life in how much they like pets, and in the activities, they engage in expressing this affection (Lago in Wilson 1998).

The owner's dog-related attitudes can affect the relationship with the dog in terms of the likelihood of abandonment of the dog (Chumley et al. 1993; Miller et al. 1996; Patronek et al. 1996; Scarlett et al. 1999; Martson and Benett 2003), in terms of benefits from the dogs companionship (Garrity et al. 1989, 1998), or in terms of grief upon the dog's death (Gosse and Barnes 1994). Thus, these are, important practical reasons for exploring this relationship in more detail. To acquire additional information on the processes pertaining to dog discipline, future research should also focus on the effects of the owner's responses on the

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underlying mechanisms of the ethological observational models of problem behavior (cf., Mills 2003).

## References

- Ainsworth, M.D. 1989. Attachments beyond infancy. *American Psychologist*. 44. 709-716.
- Ainsworth, M.D. Blehar, M.C., Waters, E. and Wall, S. 1978. *Patterns of attachment. A Psychological study of the strange situation*. Hillsdale NY: Laurence Erlbaum Associates Inc.
- Alurke, A. and Sanders, C.R.. 1996. *Regarding animals*. Philadelphia: Temple University Press.
- Askew, H. R. 1996. *Treatment of Behavior Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Scientific Publications.
- Baumrind, D. 1973. The development of instrumental competence through socialization. In Pick, A.D. (ed). *Minnesota Symposia on Child Psychology*. Minneapolis: University of Minnesota Press. (vol. 7).
- Beck, A. and Katcher, A. 1996. *Between Pets and People: The Importance of Animal Companionship*. Purdue University Press.
- Belsky, J. 1984. The determinants of parenting: A process model. *Child Development*. 55. 83-96.
- Ben-Michael, J., Vossen, J. M. H., Felling, A. J.A. and Peters, V. A. M. 1997. The perception of problematic behavior in dogs: application of multi-dimensional scaling and hierarchical cluster analysis. *Anthrozoös*. 10(4). 198–213.
- Ben-Michael, J., Korzilius, H. P. L. M., Vossen, J. M. H. and Felling, A. J. A. 2000a. Disciplining behavior of dog owners in problematic situations: The factorial structure. *Anthrozoös*. 13(2). 104–112.
- Ben-Michael, J., Korzilius, H. P. L. M., Felling, A. J. A., and Vossen, J. M. H. 2000b. An exploratory model of dog disciplining. *Anthrozoös*. 13(3). 150–163.
- Birke, L. 1994. *Feminism, animal, and science: the naming of the shrew*. Buckingham: Open University Press.
- Block, J.H. 1981. *The Child-rearing Practices Report (CRPR): A Set of Q-items for the Description of Parental Socialization Attitudes and Values*. Unpublished manuscript. University of California, Berkely.
- Borenstein, M.H., Haynes, O.M., Azuma, H., Galperin, C., Maital, S., Ogino, M., Painter, K., Pascual, L., Pêcheux, M-G., Rahn, C., Toda, S., Venuti, P., Vyt, A. and Wright B. 1998. A cross-national study of self-evaluations and attributions in parenting: Argentina, Belgium, France, Israel, Italy, Japan, and the United States. *Developmental Psychology*. 34(4). 662-676.
- Bowlby, J. 1969. *Attachment*. Harmondsworth, Uk: Penguin.
- Bowlby, J. 1973. *Attachment and Loss: Vol. 2. Separation: Anxiety and Anger*. New York: Basic Books.
- Bowlby, J. 1979. *The Making and Breaking of Affectional Bonds*. London: Tavistok.
- Bryant, B.K. 1990. The richness of the child-pet relationship: a consideration of both benefits and costs of pets to children. *Anthrozoös*. 3(4). 253-261.
- Brock de A.J.L.L. 1994. Ouderlijk opvoedkundig handelen: de invloed van ouder- kind- en contextuele kenmerken. (*Parental Child-rearing Behaviors: the Influence of Parent, Child, and Contextual Characteristics*). Doctoral dissertation, Nijmegen: University of Nijmegen.
- Budiansky, S. 1992. *The Covenant of the Wild: Why Animals Choose Domestication*. New York: Morrow.
- Chumley, P.R. Gorsky, J.D., A.M. Saxton, B.P. Granger and J.C New. 1993. Companion animal attachment in military transfer. *Anthrozoös*. 6. 258-271.

- Collis, G.M. and J. McNicholas. 1998. A theoretical basis for health benefits of pet ownership. In Wilson, C.C. and. Turner, D.C. (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.
- Cusak, O. (1988). *Pets and Mental Health*. New York: Howorth Press.
- Cramer, K.M. and Neyedly, K.A. 1998. Sex differences in loneliness: the role of masculinity and femininity. *Sex Roles*. 38(7/8). 645-653.
- Dunn, J. 1993. Young children's close relationship: beyond attachment. *Individual Differences and Development*. Vol. 4. Newbury Park, California: Sage.
- Eddy, T.J., Gallup, G.G., and Povinelli, D.J. 1993. Attribution of Cognitive states to animals: Anthropomorphism in comparative perspective. *Journal of Social Issues*. 49(1). 87-101.
- Endenburg, N. 1995. The attachment of people to companion animals. *Anthrozoös*. 8(2). 83-89.
- Fazio, R.H. 1986. How do attitudes guide behaviour? In Sorrentino, R.M. and Higgins, E.T. (eds). *Handbook of Motivation and Cognition*. New-York: Guilford. 204-243.
- Fazio, R.H., Ledbetter, J.E. and Towles-Schwen, T. 2000. Attitudes and social cognition – On the costs of accessible attitudes: Detecting that the attitude object has changed. *Journal of Personality and Social Psychology*. 78(2). 197-210.
- Fogle, B. 1990. *The Dog's Mind*. London: Pelham Books.
- Franklin, A. 1999. *Animals and Modern Cultures: a Sociology of Human-animal Relations and Modernity*. London: Sage Publications.
- Friedman, E. 1995. The role of pets in enhancing human-well-being: Psychological effects. In: Robinson, I. (ed). *The Waltham Book of Human-animal Interaction: Benefits and Responsibilities of Pet-ownership*. Oxford, UK: Pergamon. 33-53.
- Gardner, F.E.M., Sonuga-Barke, E.J.S. and Sayal, K. 1999. Parents anticipating misbehavior: An observational study of strategies parents use to prevent conflict with behavior problem children. *Journal of Child Psychology and Psychiatry*. 40(8). 1185-1196.
- Garrity, T.F., Stallones, L., Marx, M.B. and Johnson, T.P. 1989. Pet ownership and attachment as supportive factors in the health of the elderly. *Anthrozoös*. 3. 35-44.
- Garrity, T.F., Stallones, L. 1998. Effects of pet contact on human well-being. In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Sage Publications: Thousand Oaks, CA. 3-22.
- Gerris, J.R.M. and Janssens, J.M.A.M. 1987. Opvoedingsgedrag van ouders in overtredingsituaties: een onderzoek naar beïnvloedende factoren. (Determinants of parental child-rearing behaviors in discipline situations.) *Pedagogische studiën*. 64(7-8). 295-307.
- Gerris, J.R.M., Vermulst, A.A., Bostel van, Janssens, J.M.A.M., Zutphen van, R.A.H. and Felling A.J.A. 1993. *Parenting in Dutch Families: A representative Description of Dutch Family Life in Terms of Validated Concepts Representing Characteristics of Parent, Children, the Family as a System and Parental Socio-cultural Value Orientations*. Institute of Family Studies: University of Nijmegen.
- Gerris, J.R.M., Vermulst, A.A. and Houtmans M.J.M. 1997. Opvoeding- en gezinsrelaties tussen jongeren en hun ouders en hun samenhang met persoonlijkheidskenmerken. (Education and family relationships between youth and their parents and their link to personal traits.) In Gerris, J.R.M. (ed). *Jongeren Problematiek: Hulpverlening en Gezinsonderzoek*. Assen: Van Gorkum.
- Gosse, G.H. and M.J. Barnes. 1994. Human grief resulting from the death of a pet. *Anthrozoös*. 7. 103-112.

- Hart, L.A. 1995. Dogs as human companions: A review of the relationship. In: Serpell, J. (ed) *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*. Cambridge: Cambridge University Press. 161-178.
- Hecht, L. McMillin, J.D. and Silverman, P. 2001. Pets, networks and well-being. *Anthrozoös*. 14(2). 95-105.
- Herzog, H.A., Betuart, N.C. and Pittman, R.B. 1991. Gender, sex role orientation and attitudes towards animals. *Anthrozoös*. 4(3). 184-191.
- Korzilius, H. P. L. M. 1996. *Mental Representations of Parenting. Structures of Perceptions, Cognitions, Emotions, and Behavioral Responses in Child-rearing Situations*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Korzilius, H. P. L. M., Gerris, J.R.M. and Felling, A.J.A. 2001. Exploration of mental scripts of perceptions, cognitions, and emotions, explaining parenting behaviors. In Gerris, J.R.M. (ed). *Dynamics of Parenting*. Leuven, Apeldoorn: Garant. 391-427.
- Kuczynski, L. 1984. Socialization goals and mother-child interaction: Strategies for long-term and short-term compliance. *Developmental Psychology*. 20. 1061-1073.
- Lane, M.S. 1998. *The humane Society of the United States: Complete Guide to Dog Care*. Boston, New York: Little, Brown and company.
- Maccoby, E.E. 2000. Parenting and its effects on children: In reading and misreading behavior genetics. *Annual Reviews of Psychology*. 51. 1-27.
- Main, M., Kaplan, N., and Cassidy, J. 1985. Security in infancy, childhood, and adulthood: A move to the level of representation. In Bretherton, I. and Waters, E. (eds). *Growing Points of Attachment Theory and Research. Monographs of the Society for Research in Child Development*. 50. (1-1, serial no. 209). 66-106.
- Mallon, G. P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös*. 6(1). 43-47.
- Martson, L.C. and Bennett P.C. 2003. Reforging the bond – towards successful canine adoption. *Applied Animal Behaviour Science*. 83. 227-245.
- McBride, A. 1995. The human-dog relation-ship. In Robinson, I. (ed). *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford: Pergamon. 99-112.
- McNicholas, J. and Collis, G.M. 1995. The end of a relationship: coping with pet loss. In Robinson, I. (ed). *The Whaltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford, UK: Pergamon. (127-143).
- McNicholas, J. and Collis, G.M. 1998. Could a type A (coronary-prone) personality explain the association between pet ownership and health? In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.
- McNicholas, J. and Collis, G.M. 2000a. Dogs at catalysts for social interactions: Robustness of the effect. *British Journal of Psychology*. 91. 61-70.
- McNicholas, J. and Collis, G.M. 2000b. Children's representations of pets in their social networks. *Child: Care, Health and Development*. 27(3). 279-294.
- Melson, G.F. 1990. Studying children's attachments to their pets: a conceptual and methodological review. *Anthrozoös*. 4(2). 91-99.
- Miller, D.D., Staats, S.R. Partlo, C. and Rada, K. 1996. Factors associated with the decision to surrender a pet to an animal shelter. *Journal of the American Veterinary Medical Association*. 209. 738-742.
- Mills, D.S. 2003. Medical paradigms for the study of problem behaviour: a critical review. *Applied Animal Behaviour Science*. 81. 265-277.
- Mitchell, R.W. and Hamm, M. 1997. The interpretation of animal psychology: anthropomorphism or behaviour reading. *Behaviour*. 134. 173-204.

## Owners' dog-rearing attitudes

- Mitchell, R.W. and E. Edmonson. 1999. Functions of repetitive talk to dogs during play: Control, conversation, or planning? *Society and Animals*. 7(1). [www.psyeta.org/sa/sa7.1/mitchell.html](http://www.psyeta.org/sa/sa7.1/mitchell.html)
- Neville, P. 1991. *Do Dogs Need Shrinks*. London: Sidwick and Jackson.
- Odendaal, J.S.J. 2000. Animal-assisted therapy – magic or medicine? *Journal of Psychosomatic research*. 49. 275-280.
- O'Farrell, V. 1992. *Problem Dog – Behaviour and Misbehaviour*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.
- Overall, K. L. 1997. *Clinical Behavioral Medicine for Small Animals*. St. Louis, MI: Mosby.
- Patronek, G.J., Glikman, L. T., Beck, A.M., McCabe, G. P. and Ecker, C. 1996. Risk factors for relinquishment of dogs to an animal shelter. *Journal of the American Veterinary Medical Association*. 209. 572-581.
- Rajecki, D.W., Rasmussen, J.L., Modlin, S.J. and Holder A.M. 1998. Dogs bites boy: judgments of blame and shame. *Anthrozoös*. 11(2). 66-73.
- Rajecki, D.W., Rasmussen, J.L., Sanders, C.R., Modlin, S.J. and Holder A.M. 1999. Good dog: Aspects of humans' causal attributions for a companion animal's social behavior. *Society and Animals*. 7(1). 17-34.
- Rasmussen, J.L. and Rajecki, D.W. 1995. Differences in similarities in human's perceptions of the thinking and feeling of a dog and a boy. *Society and Animals*. 3. 117-137
- Rook, K.S. 1990. Social relationship as a source of companionship. In Saranson, B.B., Saranson, I.G. and Pierce, G.R. (eds). *Social support: An Interactional View*. New York: John Wiley.
- Sable, P. 1991. Attachment, loss of spouse and grief in elderly adults. *Omega*. 23. 129-142.
- Sable, P. 1995. Pets, attachment and well-being across the life-cycle. *Social Work*. 40(3). 334-341.
- Serpell, J.A. 1986. *In the Company of Animals*. Oxford: Basil Blackwell.
- Serpell, J. A. 1996. Evidence for an association between pet behavior and owner attachment levels. *Applied Animal Behavior Science*. 47. 49-60.
- Serpell, J. A. 1998. Perceiving and Misperceiving Guide Dogs: Reliability of Behavioural Survey Data. Paper presented at the ISAZ'98 conference, Prague, Czech Republic, 10-12<sup>th</sup> September.
- Siebenheller, F. A. 1990. *Problematische Opvoedingssituaties: Percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic Child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of Antecedents of Reactions of Parents in Every-day Child-rearing Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Siegel, J.M. 1990. Stressful life events and use of physician services among the elderly: the moderating role of pet ownership. *Journal of Personality and Social Psychology*. 58. 1081-1086.
- Siegel, J.M. 1993. Companion animals: in sickness and in health. *Journal of Social Issues*. 49(1). 157-167.
- Tenner, E. 1998. Citizen Canine. *Wilson Quarterly*. 22. 71-79.
- Tilburg van, T., 1988. *Verkregen en Gewenste Ondersteuning in het Licht van Eenzaamheidservaringen*. Doctoral dissertation, Nijmegen: University of Nijmegen
- Triebenbacher, S.L. 1998. The relationship between Attachment to companion animals and self-esteem: A developmental perspective. In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Thousand Oaks, CA: Sage. 173-186.



- Turner J.R. and Avison, W.R. 1985. Assessing risk factors for problem parenting: the significance of social support. *Journal of Marriage and the Family*. (Nov.). 881-892.
- Vermulst, A.A. and Gerris, J.R.M. 1986. *Exploratief Onderzoek naar Determinanten van Ouderlijk Functioneren: Enkele Voorlopige Bevindingen. (Explorative Research of Determinants of Parental Functioning: Some preliminary Findings)*. KU Nijmegen, afdeling Empirische Pedagogiek. Internal Publication.
- Voith, V. L. 1983. Animal behavior problems: an overview. In Katcher, A.H. and. Beck, A. M. (eds). *New Perspectives on Our Lives with Companion Animals*. Philadelphia:University of Pennsylvania Press. 181–186.
- Weiss, R.S. 1991,. The attachment bond in childhood and adulthood. In Parkes, C.M. Stevenson-Hinde, J. and Marris, P. (eds). *Attachment Across the Life Cycle*. New York: Tavistok/Routledge. 66-76.
- Wilson, C.C. 1998. A conceptual framework for human-animal interaction research: The challenge revised. In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Sage Publications: Thousand Oaks, CA. 61-90.

## Owners' dog-rearing attitudes

### Appendix 1.

#### A. Self-report scale for dog rearing practices and orientations

The following statements are concerned with how you think and feel over various issues pertaining to the dog's education/training. The purpose is to find out how these statements fit you. The most left box states '*entirely agree*' en de most right box states '*entirely disagree*'. Indicate by each statement which box fits you at most. Please check this box.

Entirely agree	Agree	Does not agree/does not disagree	Disagree	Entirely disagree
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1. Dog rearing is a heavy burden
2. I consider raising my dog as a very difficult task.
3. If you choose to have a dog, you have to give up a large number of things.
4. Dog rearing is continuous adjustment of own plans
5. Owner denies the dog pleasures when he misbehaves
6. Raising dogs is the most beautiful task that one can wish.
7. Owner secludes dog that misconducts
8. Raising dogs is an everyday heavy commitment
9. I show my dog that I love him/her by hugging, petting, and kissing him.
10. Dog raising means it is impossible to manage daily life
11. I find the raising of my dog very satisfying for my personal life.
12. Raising dogs is a gratifying task.
13. Raising my dog is a gratifying subject of conversation.
14. By raising my dog, my life has got a new meaning.
15. Dog's life is easier when he has a stable routine
16. Raising the dog is a task that I have to accept.
17. I do not allow the dog to ignore my commands.
18. My dog must obey me; this is not a trifling matter.
19. A dog has to obey his owners.
20. If my dog does something that he/she is not allowed, I strike him/her.
21. The concern for the dog must have a top priority for the owner.
22. A good owner puts the dog first.
23. I think that the owner must first take care of the dog and then take care of himself.
24. Dog rearing is re-experiencing child rearing

#### B. Attachment scale

1. People are in attached to their companion animals to different degrees. How attached are you to your dog? Which answer corresponds mostly with you feelings? Pleas check your reaction.

Very attached	1
Attached	2
Not so attached	3
Not attached	4
Not at all attached	5

2. Do you consider your dog as a family member?

Yes	1
No	2

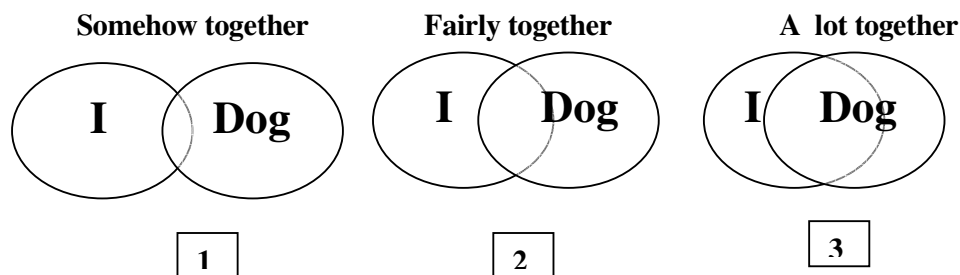
3. Does the dog sleep in your sleeping room?

Always	1
Sometimes	2
Never	3

4. Does the dog sleep in your bed?

Always	1
Sometimes	2
Never	3

5. The circles below stress the bonding between dog and owner. Choose the drawing that mostly describes the relation between you and your dog. Indicate which box fits you at most. Please check this box.



### C. The 'social support' items

The following statements are about the contacts with other people. The purpose is to find out how these statements fit you. The most left box states '*entirely agree*' en de most right box states '*entirely disagree*'. Indicate by each statement which box fits you at most. Please check this box.

Entirely agree	Agree	Does not agree/does not disagree	Disagree	Entirely disagree
----------------	-------	----------------------------------	----------	-------------------

1. I want to share my feelings.
2. I try to deal with sorrow on my own.
3. I watch out when telling my problems.
4. Feelings are my own business.
5. I watch out to tell others about my problems.

## Appendix 2.

Subgroup analysis: standardized regression solution that enables comparison between sex subgroups and total group. Correlations  $\geq |.26|$  (in bold) are considered to be significant at the 5% level (see Analysis)

### 1. 'Power assertion' variant

Background variable	n	Path P1 $\rightarrow$ R1	P1 $\rightarrow$ E2	E1 $\rightarrow$ R1	E2 $\rightarrow$ R1	P3 $\rightarrow$ E2	P3 $\rightarrow$ R1	E3 $\rightarrow$ R1	P3 $\rightarrow$ E2	S $\rightarrow$ E1	B $\rightarrow$ E1	A $\rightarrow$ E3	I/C $\rightarrow$ E3
Sex owner													
Female	656	<b>.36</b>	<b>.46</b>		<b>.41</b>		.10			.23	-.22	<b>-.38</b>	-.15
Male	224	<b>.30</b>	<b>.48</b>	-.15	<b>.46</b>	.15	.19						
Total group	880	<b>.34</b>	<b>.46</b>		<b>.41</b>		.10						

### 2. 'Encouragement/comfort' variant

Background variable	n	Path P1 $\rightarrow$ R2	P1 $\rightarrow$ E1	E1 $\rightarrow$ R2	P1 $\rightarrow$ E2	E2 $\rightarrow$ R2	P2 $\rightarrow$ E2	P3 $\rightarrow$ E2	S $\rightarrow$ E1	S $\rightarrow$ R2	B $\rightarrow$ E1
Sex owner											
Female	656	.20	.23	.21	<b>-.45</b>	-.18	.10	.10		.19	
Male	224	.23		.21	<b>-.48</b>	<b>.46</b>		.15	.23	.19	-.21
Total group	880	.20	.19	.27	<b>-.46</b>	-.18	.10	.10		.20	

## **Chapter 6.**

### **Dogs and Children**

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### 6.1 Introduction

Dogs are not considered the mental equals of people. However, they are frequently anthropomorphized, 'babyfied' and regarded as capable of reciprocity and of having a social place in the daily routines and events of the family (Albert and Bulcroft 1988; Sanders 1993; Voith 1993; O'Farrell 1994; Arluke and Sanders 1996; Beck and Katcher 1996; Serpell 2002). As described in chapter one, the relationships between the dog owner and his dog frequently resemble the relationship between parent and child, i.e. dogs fill the same role as children, they are dependent on the owner and need the owner to look after them (Mallon 1993; Askew 1996; Arluke and Sanders 1996; Serpell 1996, 2002). The satisfaction of parents in providing for the physical and emotional needs of their children is analogous in many ways to how owners gratify their dogs' needs in feeding, physical contact (dogs want to be in their owner's company, to be patted, to be cuddled, to be taken to a walk, or to play). Studies of Hirsh-Pasek and Treiman (1982) and Burnham et al. (2002) also found similarities of pet- to infant-directed speech. Owners talk to their dog in a similar way in which parents talk to their children by using short sentences, ask more questions, and give more orders.

Consequently, it seemed obvious to use studies describing the parent-child interaction in problematic situations as a frame of reference for our study. We were particularly interested in the specific similarities in disciplinary methods between the parents and the dog owners in problematic situations with, respectively, the child and the dog. This comparison is valuable, not only because of the additional insight and understanding it provides to the relationship between owner and dog in problematic situations, but also because of possible consequences concerning the disciplinary methods in problematic dog-rearing situations. We used the studies of Siebenheller (1990) and Korzilius (1996) as the primary point of reference for the present study. The study of Siebenheller (1990) examines the parental level, i.e. the parent is followed in his emotions and behaviors in different confrontations with problematic child behavior. The study of Korzilius (1996) and the present study, consider the parent/owner, respectively, in the situation, i.e. the data is measured as subjective parent or owner mental representations (perceptions, emotions, cognitions and behaviors) of child/dog-rearing situation, respectively.

The study of Siebenheller (1990) is an interactionistic study in which both personal and situational characteristics explain, in an additive manner, the emotional and behavioral reactions of the parent in problematic situations with the child. Siebenheller described the

parental emotional and behavioral reactions as an addition to the situational and parental effects. Siebenheller (1990) found that attitudes could affect parental reactions on different levels (for example, warm parents react with the same level of induction in all situations, however, less warm parents show situational differences). Siebenheller also found that attitudes can affect parental reactions in an exclusive manner, e.g. restrictive parents use more power assertion than less restrictive parents in all situations. Siebenheller (1990) further described situational effects, such as the differentiated use of power assertion, depending on the character of the situation. In conclusion, the situational characteristics and the personality characteristics (and child-rearing dimensions) appear to explain the emotional reactions and the disciplinary reactions of the parents. Korzilius (1996) and the present study both found that all interactional mental representations [perception, cognitions (only Korzilius), and emotions] are of importance, and concurrently lead to parental/owner behavioral responses. The structures underlying parental/owner representations appear to apply, to a certain extent, to all parents/owners. This means that, within the different groups, there is a similar image regarding the contents of the important aspects in the interaction with the child or with the dog. The mental representations are subjective parental/owner assessments of rearing situations. They are conceived as a function of the situation or as proximal situation characteristics (Gerris and Janssens 1987). Further, the child/dog-rearing-related attitudes used in these studies may represent an indication of the traits of the parent or the dog owner. Investigations of the structure and relationships of subgroups of parents/dog owners indicate general situational effects. However, some fluctuations, for example, due to the sex of the parent/owner are possible. These studies were described in Chapter One.

## **6.2 Comparison of disciplinary methods for dogs and children**

Bearing in mind the differences between dogs and humans, we compared the findings of the current study with studies of child rearing in problematic situations. The findings presented in the current study are concurrent with some of the outcomes in studies of child rearing in problematic situations (Siebenheller 1988, 1990; Korzilius 1996; Korzilius et al., 2001). We would like to place an annotation pertaining to the conclusions of this comparison. Indeed many studies deal with child disciplining. The present study discusses the owner's emotions and disciplinary reactions in relation to a limited number of findings on child disciplining, chiefly the studies of Siebenheller and Korzilius. Therefore, the outcomes of this comparison give only a partial image of the similarities and differences between child discipline and dog

discipline in problematic daily situations. Future research should give additional insight into these aspects.

### **6.2.1 Mental representations and attitudes**

The findings pertaining to the perception of the dog-rearing problematic situations, emotions, and behavior modification techniques are in agreement with the outcomes of studies of child rearing in problematic situations. Disobedience, fearfulness, and submissiveness are the most common perceptions in problematic situations with children and with dogs. Situations of disobedience or inappropriate behavior evoke in owners emotional reactions of anger and irritation in a manner similar to that of children who display inappropriate behavior (Siebenheller 1988, 1990; Korzilius 1996). Besides anger and irritation, dog owners experience in problematic situations where dogs are fearful, also emotions of compassion and anxiety. These findings are in accordance with Dix et al. (1989), Siebenheller (1990) and Korzilius (1996) who found similar results in the parent-child interaction in problematic rearing situations. In problematic situations with the dog, we identified in the male owners feelings of compunction (blame and shame). On the contrary, studies on the parental behavioral reactions in problematic situations with the child did rapport compunction as an emotion that affects parental reactions.

Further, we found that some of the dog-rearing-related behavior modification strategies were comparable to child related behavior modification strategies. Child discipline frequently focuses on two main parental reactions: modification of non-compliance and internalization of the disciplinary requests (Siebenheller 1990; Baumrind 1996; Korzilius 1996). In confrontations with dogs in problem situations when it was necessary to achieve immediate control over the dog, owners used mostly power assertive behavior. However, contrary to dog misbehavior situations, the reaction of the parent to child misbehavior frequently involves punitive parental reactions, combined with a discussion of the consequences of the misbehavior and an attempt to motivate the child with reasoning (Siebenheller, 1990; Grusec and Goodnow 1994; Hoffman, 1994; Baumrind, 1996; Korzilius, 1996; Korzilius et al., 2001). The parental perception of the child as a victim increased encouraging, stimulating, and inductive behavior (control attempts which induce internalization of motivation based on reasoning). Grusec and Goodnow (1994) and Baumrind (1996) suggested that the inductive behavior affects the internalization process in children and has long-term effects on the child's behavior in problematic situations and in the socialization process (a process by which children



through education, training and imitation acquire the culture, habits, and values congruent with adaptation to that culture).

Although there is no evidence of internalization processes in dogs, there are dog owners who prefer not to enforce compliance of the rules as a behavior modification strategy when the dog is fearful or perceived as helpless (even though the dog exhibited actual aggression). Askew (1996) argues that the owner who encourages or helps the dog as a reaction to misbehavior attempts to alleviate the dog's situation without actually correcting its behavior. This implies that encouragement is used to prevent or avoid problematic behavior, and not as a corrective measure for the long term. However, we believe that encouraging and helping behavior might be more effective in eliciting appropriate behavioral responses in dog and can over time facilitate modification of certain behavior problems, such as fear and phobias.

Compared with humans (Fazio, 1986, 2000; Siebenheller, 1990), this study could not show that the dog-rearing-related attitudes (satisfaction, burden, involvement/care, and discipline), attachment, and social support affect the perceptions of the dog owner in problematic situations and the use of power assertion. However, we could show that satisfaction, and to a lesser extent (mainly in the male owner group) burden, attachment, and involvement affect the emotional and behavioral reactions of the dog owner. Satisfaction<sup>1</sup> seems a significant predictor of the disciplinary reactions of the dog owner. It decreases power assertion and increases encouraging/helping reactions. Further, it appears that satisfaction does not exclude the wish of the owner for immediate compliance in situations of displayed disobedience. Similarly, studies of parent-child interaction in problematic situations suggested that the use of punishment within the context of a supportive, affective parent-child relationship could be a necessary tool in disciplinary encounters with young children (Siebenheller, 1990; Korzilius, 1996, Korzilius et al., 2001).

### **6.2.2 The structures of the mental representations in problematic situations**

Upon examination of the structure of the dog owner and parental reaction in problem situations (according to Korzilius, 1996), we conclude that there is a basic collective situation-specific structure that describes the sequence model: Perception → Emotion → Reaction. This model is common for all the parents and all the dog owners, respectively. In

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<sup>1</sup> Items included in 'satisfaction scale' are comparable in content to items of affect/warmth used by Siebenheller (1990) and Korzilius (1996) in the 'affection/warmth scale'.

contradiction to the child discipline results of Korzilius (1996), we cannot assert that the relationships describing dog discipline are causal. However, our models do provide some indication of the probable combinations among various perceptions, emotions, and behavioral reactions that can describe the dog owner's reactions in dog-rearing situations. The results of both studies (the present study and the study of Korzilius, 1996 and Korzilius et al. 2001) showed that the structures of the parents' and the owners' perceptions, emotions, and behavioral reactions were comparable for all the subjects; they were reasonably reliable, and rather invariant. These basic model structures do not, however, exclude other possible paths, which are not detected in the present studies. Further, both studies show that child/dog-rearing situations are a combination of various representations resulting in a reaction to the dog and or to the child, respectively.

In situations where the dog's behavior poses danger to himself or to others and in situations where the child is clearly a transgressor owners and parents become angry and use forms of power assertion. However, when the child is perceived as a victim and when the dog is perceived as having problems or is frightened, the tendency of the parent and the owner, respectively, to become angry or irritated and use punishment decreases and to use encouragement and comfort increases. Korzilius (1996) showed that parents also use *laissez faire* strategies (parents refrain from reactions to the child) and other-oriented induction (parents point out possible hurtful or other implications which the child's behavior holds for the others) behavior strategies. The present study did not report *laissez faire* and other-oriented induction strategies used with dogs. Other-oriented strategies can hardly be considered as a behavior modification for dogs as we cannot assume that dogs are aware of the hurtful implications of their behavior.

### **6.2.3 The sex of the owner as a source of variation in the possible relationships among the owner's mental representations**

Despite similar basic structures of the mental representations, the sex of the owners appeared to affect several important paths in the exploration model. Further, the behavioral responses of the male and female owners were affected by perceptions and by emotions, this in a similar way as shown by Korzilius (1996) with children.

Some of the differences emerged in the intensity of the emotional reactions and some in the attitudes that influence the disciplinary reactions of the male and female owners. In general, the behavioral reactions of the male owners' towards dog exhibiting problematic behaviors

are more intense than the reactions of the female owners. Additionally, male owners tend to be more susceptible than female owners to behavior perceived as inappropriate. Our results are in accordance with Sanders (1990) who suggested that male owners who perceive the dog's behavior as unsuitable, experience it as a violation of private or public order and, consequently, they tend to express more intensive feelings of compunction. This is especially true if the behavior is experienced as a violation of private or public order (Sanders 1990). Male owners were also more inclined than the female owners to allow emotions of irritation and anger develop into power assertive behavior. Furthermore, female owners, although affected by the unpleasantness of the behavior, appear more likely to perceive the dog as helpless or as a victim and to then show encouraging behavior. This is in line with the conclusions of Korzilius (1996) about child discipline in problematic situations. He also found that in particular fathers deviated in several cases from the total group solution, namely, the causal relationships seemed to be stressed differently by fathers; e.g., fathers were more inclined to let emotions of anger and irritation result in power assertive reaction. Further, Korzilius suggested that although the parental mental representations seem to be rather invariant with regard to the sex of the parent, that the invariance must not be conceived as never changing and always equal.

### 6.3 Conclusions

The great majority of first-hand experience with animals in Western culture is based on interactions with personal pets, a situation in which animals are treated primarily as children. The owners' understanding is filtered through cognitions and behavioral interactions closely tied to the relations between human parents and children (Timberlake, 1997). Although the parallels between how parents behave towards their children and dogs are close enough to suggest that the behavior towards the dog is essential parental behavior (Askew, 1996, Greenebaum, 2004), we argue that the behavior towards the dog is a modified form of human parental behavior which varies from parental behavior in some imperative ways. In particular, the differences between behavior towards children and towards dogs in the area of disciplining and behavior modification are rather interesting.

In general the human monitors the behavior of the dog or the child, compares it to some 'cognition model' or internal representation of the 'ideal' behavior and does whatever is required to modify it or to make it correspond to his/her internal representations by using various disciplinary/modification strategies. A major child-dog difference involves the model

## Dogs and children

of the desirable or appropriate behavior. The owner does not try to train dogs to behave like a child. However, the owner tries to modify the dog's behavior to fit in what the owner considers as normal and desirable. The concept of what is normal and desirable is what makes the difference in dog and child discipline. Saying that, we argue further that the perception of the dog's misbehavior and of the child's misbehavior, respectively, as well as the involved emotional orientations and the disciplinary strategies bear some similarities as well as differences:

- Dogs and children are scolded for misbehavior, rewarded or can avoid punishment for correct behavior, and shown via modeling or symbolic language with the child, and by manipulating the dog – what kind of behavior is required or desired.
- The basic model of Perception → Emotion → Reaction is similar in both groups owners and parents, respectively: perception of transgression leads to emotions of anger and irritation and consequently to power assertion. Fear/submission or helplessness induces emotions of anxiety/worry/compassion and consequently encouraging and comforting reactions with dogs or adhorative reactions with children. Korzilius (1996) showed that parents use besides power assertion and adhorative behavior also behavior modification techniques as *laissez fair* en other oriented induction. These behaviors are specific for children. Feelings of compunction were not reported by Siebenheller (1990) and Korzilius et al. (2001).
- The effect of the sex of the owner or the parent: it seems that the structure in the parental perceptions of child-rearing situations is similar within the group of mothers and fathers as it is for males and the females within the group of dog-owners. However, some subgroup differences appear regarding the relationships in the exploration model. Fathers and male owners in particular, deviated in several cases from the total group and from the mothers and female owners, respectively. The relationships between emotions en behavioral reactions seemed to be stressed differently by fathers and male owners; for example, the emotions of anger and irritation of the fathers and male owners that regulate power assertive reactions seemed to be more intense than the emotions of the mothers and the female owners.
- A major difference between children and dogs is the use of language. Contrary to dogs, children understand language and are able to respond to reasoning. The parent can use symbolic language to shape behavior. Korzilius (1996), Hoffman (1994), and Baumrind (1996) suggested that parents frequently used adhorative and inductive

behavior as a behavior modification technique. These techniques contain aspects of motivation, reasoning, and internalization. The tendency of owners to project human traits and human mental states to pets may lead them to use language to change behavior. The verbal tendency of owners is a major component of human parental teaching that often surfaces when owners try to modify the dog's behavior; e.g. 'come on!', 'just sit down', 'don't be afraid' (Beck and Katcher, 1996; Belk, 1996). Though Kaminsky et al. (2004) argue that dogs are able to attach meaning to specific sounds, and although dogs understand individual words of command, there is no evidence that dogs are able to understand the meaning of human words, the combination of words made into new sentences or to be motivated by reasoning, and to be able to internalize as children do. The lack of language understanding also means that dogs have no moral sense. Contrary to children, dogs cannot be guilty, they cannot be held responsible and they cannot be blamed. Reverse to children, dogs are incapable of understanding the concept of rules and therefore it means that there is no use trying to change the dog's behavior or teach him something by explaining it to him, even if the explanations takes the form of actions rather than words.

## References

- Albert, A. and Bulcroft, K. 1988. Pets, family and the life course. *Journal of Marriage and the Family*. 50(2). 543-552.
- Alurke, A. and Sanders, C.R. 1996. *Regarding animals*. Temple University Press. Philadelphia.
- Askew, H.R. 1996. *Treatment of Behaviour Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Scientific Publications.
- Astin, S., Redston, P. and Campbell, A. 2003. Sex differences in social representations of aggression: men justify, women excuse? *Aggressive Behavior*. 29. 128-133.
- Baumrind, D. 1996. The discipline controversy revisited. *Family Relations*. 45. 405-414.
- Beck, A. and Katcher, A. 1996. *Between Pets and People: The Importance of Animal Companionship*. Purdue University Press.
- Belk, R.W. 1996. Metaphoric Relationship with pets. *Society and Animals*. 4(2). [www.psyeta.org/sa/sa4.2/belk.html](http://www.psyeta.org/sa/sa4.2/belk.html)
- Burnham, D., Kitamura, C. and Vollmer-Conna, U. 2002. What's new pussycat? On talking to babies and animals. *Science*. 296(5572). 1435.
- Dix, T., Ruble, D.N. and Zambarano, R.J. 1989. Mothers' implicit theories of discipline: Child effects, parents effects, and the attribution process. *Child Development*. 60. 1373-1391.
- Fazio, R.H. 1986. How do attitudes guide behaviour? In Sorrentino, R.M. and Higgins, E.T. (eds). *Handbook of Motivation and Cognition*. New-York: Guilford. 204-243.
- Fazio, R.H., Ledbetter, J.E. and Towles-Schwen, T. 2000. Attitudes and social cognition – On the costs of accessible attitudes: Detecting that the attitude object has changed. *Journal of Personality and Social Psychology*. 78(2). 197-210.
- Gerris, J.R.M. and Janssens, J.M.A.M. 1987. Opvoedingsgedrag van ouders in overtredingssituaties: een onderzoek naar beïnvloedende factoren (Determinants of parent child-rearing behaviors in discipline situations). *Pedagogische Studiën*. 64. 295-307.
- Grusec, J.E. 1997. A history of research on parenting strategies and childrens internalization of values. In Grusec, J.E. and Kuczynski, L. (eds). *Parenting and Children's Internalization of Values. A Handbook of Contemporary Theory*. New York: Wiley. 3-22.
- Grusec, J.E. and Goodnow J.J. 1994. Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*. 30 (1). 4-19.
- Hirsh-Pasek, K and Treiman, R. 1982. 'Doggerel': Motherese in a new context. *Journal of Child Language*. 9. 229-237.
- Hoffman, M.L. 1994. Discipline and internalization. *Developmental Psychology*. 30(1). 26-28.
- Kafer, R.D., Lago, J.D., Wamboldt, P. and Harrington, F. 1992. The Pet Relationship-Scale: Replication of psychometric properties in random samples and association with attitudes towards wild animals. *Anthrozoös*. 5. 93-105.
- Kaminski, J., Call, J. and Fischer, J. 2004. Word learning in a domestic dog: Evidence for 'Fast Mapping'. *Science*. 304. 1682-1683.
- Korzilius, H. P. L. M. 1996. *Mental Representations of Parenting. Structures of Perceptions, Cognitions, Emotions, and Behavioural Responses in Child-Rearing Situations*. Doctoral dissertation, Nijmegen: University of Nijmegen.

- Korzilius, H. P. L. M., Gerris, J.R.M. and Felling, A.J.A. 2001. Exploration of mental scripts of perceptions, cognitions, and emotions, explaining parenting behaviors. In Gerris, J.R.M. (ed). *Dynamics of Parenting*. Leuven, Apeldoorn: Garant. 391-427.
- Mallon, G.P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös*. 1(1). 43-47.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.
- Sanders, C.R. 1990. Excusing tactics: Social responses to the public misbehaviour of companion animals. *Anthrozoös*. 4(2). 82-90.
- Sanders, C.R. 1993. Understanding dogs: Caretakers; attributions of mindedness in canine-human relationship. *Journal of Contemporary Ethnography*. July. 205-226.
- Serpell, J. A. 1996. Evidence for an association between pet behavior and owner attachment levels. *Applied Animal Behavior Science*. 47. 49-60.
- Serpell, J. A. 1998. Perceiving and misperceiving guide dogs: reliability of behavioural survey data. *Paper presented at the ISAZ'98 conference, Prague*. Czech Republic, 10-12<sup>th</sup> September, 1998.
- Serpell, J. A. 2002. Anthropomorphism and anthropomorphic selection beyond the 'Cute Response'. *Society and Animals*. 10(4). [www.psyeta.org/sa/sa10.4/serpell.html](http://www.psyeta.org/sa/sa10.4/serpell.html).
- Siebenheller, F. A. 1988. Problematische opvoedingssituaties: subjectieve percepties, affectieve belevingen en gedragingen van ouders (Problematic child-rearing situations: subjective perceptions, affective reactions and behaviors of parents). In Gerris, J.R.M. and Acker, J. van (ed). *Gezinsrelaties Onderzocht*. Amsterdam/Lisse: Swets and Zeitlinger. 77-98.
- Siebenheller, F.A. 1990. *Problematische Opvoedingssituaties: Percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic Child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of Antecedents of Reactions of Parents in Every-day Child-rearing Situations)*. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Timberlake, W. 1997. An animal-centred, causal-system approach to the understanding and control of behavior. *Applied Animal Behaviour Science*. 53. 107-129.
- Voith, V. 1993. Anthropomorphism, spoiling, and environmental factors. *Tijdschrift voor Diergeneeskunde*. 118. suppl. 1. 61s-63s.
- Wilson, C.C. 1998. A conceptual framework for human-animal interaction research: The challenge revised. In Wilson, C.C. and Turner, D.C. (eds). *Companion Animals in Human Health*. Sage Publications: Thousand Oaks, CA.





## **Chapter 7. Discussion**

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### 7.1 Summary of the study

The quality of the owner's relationship with the dog depends, to a large degree, on the dog's behavior. If the dog's behavior is such that it meets the owner's expectations and if there are minimal behavioral conflicts, the relationship can be rewarding. Often, however, we find that a companion animal falls short of the caretaker's expectations, or there are serious behavior problems that prevent the establishment of a close attachment or erode an existing attachment, leading to dissatisfaction with the pet, and perhaps, abandonment (Hart and Hart 1997).

The present study is an explorative research in the field of the relationship between dog and owner. It is focused on the mental representations of the dog owner in problem situations. 'Mental representations' is a blanket term that indicates perceptions, emotional reactions, and behavioral responses and represents the processing taking place in the owner's mind during interactions with the dog. The study has several aims: description of the problematic situations with the dog as perceived by the owner and the description of the emotional and behavioral reactions of the dog owner in these situations. Further, the current study explores the relationships between these representations.

An inventory of situations in which the dogs were perceived as problematic showed that the owner recognized behavioral problems related to aggression, disobedience and problems caused by circumstances and temperament (separation related behavior, anxiety, etc.).

The data were analysed using multidimensional scaling and hierarchical cluster analysis. We found that the situations perceived as problematic were related to six categories divided into three dimensions: disobedient behavior vs. fearful behavior, aggressive behavior vs. aversive behavior and, sexual (mating) behavior vs. uncontrolled (excited) behavior. The hierarchical clusters were: 'fearful', 'aggressive/dominant', 'mating', 'emotional', 'bored/lonely', 'eating habits', 'unruly' and 'disobedient'. The results show that the clusters fit in the dimensional representations.

The current study examines possible dog owner mental representations and the dog-related attitudes that occur in the owner's mind during a problematic incident with the dog. A questionnaire derived from the inventory of problematic situations was used to examine the emotions and behavior modification techniques employed by the dog owners in these problematic situations. The most frequently encountered factors in the owners' emotions were 'compassion/anxiety', 'anger/ irritation', and 'compunction' (remorse and shame). Furthermore, the factors describing the most frequently employed behavior modification techniques were 'power assertion' and 'encouragement/comfort'. Reactions characterized by

taking action to enforce the rules and by carrying out elements of prohibition have been labeled 'power assertion'. Reactions characterized by helping and putting the dog at ease, have been labeled as 'encouragement/comfort'.

The following step was to investigate which attitudes were related to the dog-owner interaction in problematic situations. The most frequently encountered factors were: 'burden', 'satisfaction', 'discipline/control', and 'involvement/care'. Further, we examined the possible roles of attachment and social support.

The mental representations are outlined in a basic sequence model Perception → Emotion → Reaction. This model encapsulates the relationships among various perceptions, emotions, and behavioral reactions of the owners. In addition, the descriptions of the underlying patterns of the owners' mental representations resulted in two major models that illustrated many problematic situations with dogs: a 'power assertion' model and a 'encouragement/comfort' model.

The 'power assertion' model accounts, for example, for a owner's perception of a situation in which 'the dog does not come back when called' as disobedience. This causes feelings of anger and irritation towards the dog, resulting in punitive reactions (e.g. demanding immediate obedience, prohibitions, or punishment). The 'encouragement/comfort' model accounts, for example, for a dog owner who perceives a situation in which 'the dog is afraid of loud noises' as fearful. Consequently, feelings of anxiety and compassion for the dog may arise. This results in encouraging and comforting reactions such as putting the dog at ease.

Subsequently, we investigated the effects of attachment and social support and the attitudes related to the owner-dog interaction in problematic situations, such as burden, satisfaction, discipline, and involvement/care. Apparently, neither of these attitudes, attachment and social support, is affected by or affects the perception of a problematic situation with a dog. Furthermore, our findings show that the measured dog-rearing-related attitudes, attachment and social support, are not correlated or associated with power assertive responses. Power assertion is an instantaneous reaction in a problematic situation which, regardless of the owner's characteristics, requires the establishment of short-term control over the dog's behavior and the dog's immediate compliance. Therefore, these attitudes may have less impact on the reaction of the owner (Kuczynski 1984, Gardner et al. 1999).

The results, however, show that, pertaining to the whole group, satisfaction has an additive effect on the encouragement/comfort responses of the dog owner. The employment of encouragement/comfort mostly occurred in situations in which an immediate behavior

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modification is impossible. For example, the change of phobic or anxious behavior in a dog is a process that takes time. Attitudes such as satisfaction can facilitate in this case an adequate response to the anxious dog.

To conclude, although the relationships among the mental representations and dog-rearing-related attitudes in a problematic situation with the dog form a basis around which fluctuations are possible, we cannot exclude the possible existence of other paths or loops which were not detected in this study. Nevertheless, one may assume that these models can function as a frame of reference which forms the owner's behavioral response in a problematic situation with the dog.

## 7.2 Practical applications

In problematic situations with the dog, owners appear to operate by combining the mental representations of dog-rearing situations with behavior modification strategies.

This study deals with dog owners' perceptions of problematic situations and their reactions to these situations. It is not about what an expert in dog behavior would describe as problematic situations or as a desirable disciplinary reaction. Accordingly, we did not choose the problem situations but rather allowed the owners to select them. Owners, even experienced owners, are frequently unfamiliar with, or misunderstand, their dog's behavior. Even when owners consecutively own dogs of the same breed for years, they are prone to make mistakes. This may be the result of a lack of awareness of subtle differences in the personalities of the dogs or differences in the contextual character of specific situations (Askew 1996; Overall 1997; Kobelt et al. 2003). According to them misinterpretation of the dog behavior occurs frequently and owners may contribute to the development of behavior problems in dogs.

For example, a fearful dog does not always respond in a submissive manner. He may also bark or bite. This may be perceived by the owner as an expression of aggression and not as a behavior caused by fear. If the owner does not recognize the situation as fearful for the dog, he may react to the dog's behavior with anger and/or shame. Consequently, the owner will employ the counterproductive measures of verbal or physical punishment. The dog will not learn to overcome fear; the dog may indeed become more anxious and aggressive.

Further, owners can unintentionally reinforce problem behavior. For example, in attempting to quiet an aggressive animal or by playing aggressive games with the dog, later aggressive play or dominance aggression may be encouraged. When the owner in some way rewards and fosters the development of behavior problems, correction of the owner's misconception (e.g.

fearful dogs should be reassured by petting) may be necessary. Correction of the owner's mistakes (for example, stop punishing dominant dogs for aggression towards submissive dogs in the household) may also be required. In addition, the owner must abandon ineffective measures such as punishing the dog long after the behavior problem occurred (Askew, 1996). This means that 'owner correction' (e.g. change of the owner's behavioral responses and change of the inadequate environments that initiate these problems) is a tool for 'dog behavior correction'. Adequate education and training of both potential/first-time dog owners and 'experienced' dog owners may be helpful. For example, animal shelters or breeders can require that inexperienced potential owners follow a course or several workshops in the first months after the adoption. First time owners report a higher prevalence of several behavioral problems including dominance, aggression, and overexcitement than do experienced dog owners (Jagoe and Serpel 1996; Kobelt et al. 2003). Experienced dog owners may perceive these behaviors in specific contexts as normal dog behavior whereas the misreading of these behaviors by first time owners may be due to their inexperience with dogs. An understanding of dog behavior mechanisms along with an increased knowledge of dog communication (by owners, dog trainers, and breeders) should improve the dog-owner relationship as well as the well-being of the dogs. The current study indicates that the many similarities between dog and child discipline may be a result of the owner's predisposition for anthropomorphism (Askew 1996; Herzog and Galvin 1997; Serpell 2002). Serpell (1992) suggested that dogs and cats that we live with are in some sense our friends and that we attribute higher levels of mental processes to those creatures that we consider our friends. Therefore, it is plausible that, in cases in which the dog is highly anthropomorphized by the owner, 'common' disciplining techniques may include the expectation that the pet understands the punishment or the inductive elements of the owner's reaction, e.g. the tone used by the owner and/or his/her body language (O'Farrell 1994; Fogel 1990; Voith et al 1992; Rasmussen and Rajecki 1995). Although anthropomorphism does not always cause behavior problems, it can nevertheless influence the way the owner contends with perceived behavior. We emphasize the need for attention to the owner's education, even to a greater degree than to obedience training. Research by Voith (1992) and Kobelt et al. (2003) shows that the existence of behavior problems is not associated as such with obedience training. However, adequate information about communication and understanding of the dog, correction of the owner's mistakes, completion of conventional obedience training, and cessation of ineffective training methods, can be helpful problem-solving measures. This would not only improve the overall

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understanding of owner-dog relationship, but may also help the owner in the employment of appropriate disciplinary strategies.

### 7.3 Limitations and future recommendations for the research

In this part, we would like to discuss some limitations and suggest some ideas on how to proceed in future research.

#### 7.3.1 Limitations

This study assesses owner behaviors and does not involve observational work on the actual behavior of the owners in dog-rearing situations. Although Decović and Gerris (1992) showed that the indicated behavior and actual observed behavior are reasonably correlated, one must take into consideration the possibility that the term behavior in this study is not actual observed behavior but instead the owner's reaction in response to a questionnaire. Thus, there is some risk that the actual behavior differs from the reactions in this study.

There is also a risk that the items may be biased. For example, the item '*social support*' may be biased if subjects do not admit their real feelings about loneliness and the need of proximity to others (Cramer and Needly 1998). One must also consider the fact that the present study concerns rather uncomplicated situations. However, everyday situations are most likely more complex for the owners because they consist of more stimuli that must be considered simultaneously.

The group of owners is relatively homogeneous (mostly belonging to middle and high socio-economic classes, and having middle to high levels of education), which may also bias the results. The subjects volunteered to take part in this study. Because the subjects are self-selected, they are not equally divided into groups of male and female owners. The nature of the sample is also defined by the fact that the subjects did not receive any financial rewards for participation in this study. It is likely that most subjects were quite involved with their dogs and thus interested in this subject. This may have had the effect of creating a rather select group.

The present study is primarily explorative. It is, therefore, difficult to generalize the results. In particular, generalization of the results of the models in relation to the sex of the owner should be cautiously considered. Additional research with larger samples of male and female owners is needed. However, we believe that our results illustrate adequately the mechanisms involved in the dog owner's reactions to problematic dog-rearing situations and offers insight

into the different psychological and behavioral disparities pertaining to dog discipline and concerning the differences between dog discipline and child discipline.

In view of the fact that the present study is limited to white Dutch owners we must bear in mind that attitudes related to dog ownership, especially pertaining to misbehaving dogs, may vary in other cultures and societies (Hills, 1993; Herzog and Galvin 1997; Elder et al., 1998). Attitudes associated to dog-ownership and his/her treatment are related to a multitude of variables including geography, religious beliefs, age, philosophical views, race, gender, socioeconomic status and even belief in evolution (Herzog et al. 1991; Driscoll 1992; Rajecki et al. 1993; Herzog and Galvin 1997). Moreover, the present study did not investigate owner understanding of triggers and motivations underlying the behavior of dogs. Several studies (Hart and Hart, 1985; Fogle, 1990; O'Farrell 1992, 1994; McBride 1995; Delta Society Working Group 1995; Askew 1996) suggest that understanding the dog, his traits, and history are important considerations in the communication between owner and dog. Understanding the innate aspects of certain behaviors may determine the reactions of the owner. Misinterpretation of the dog's behavior, possibly caused by miscommunication or misunderstanding, may lead to incorrect disciplinary strategies and may be counterproductive. This may contribute to additional behavior problems and affliction for the dog. Evidence is mounting that animal abuse, frequently embedded in families scarred by domestic violence, child abuse, and neglect often predicts the potential for other violent acts (Ascione and Arkow 1999; Carlisle-Frank et al. 2004).

Further, we did not investigate the effect of the dog's character on the owner's response. However, Siebenheller (1990) in his research with children found that the child's behavioral characteristics have little influence on the disciplinary behavior of the parent; therefore, we can assume that this may also be the case with dogs. Moreover, the contribution of the owner's cognitive affects is not discussed in this study. Korzilius (1996) and Korzilius et al., (2001) showed that cognitions belong to the mechanism that defines the parent's reaction in child rearing situations.

### 7.3.2 Recommendations for research

The present study has an exploratory character. It uses human studies of child-rearing situations as a frame of reference. We believe that the findings of the present study provide a good foundation for further research. However, we find it necessary to add these remarks:

We suggest a repetition of this study with a group of owners that are randomly selected.

What owners report as their ownership practices and what they actually do in real interactions with their dog may or may not correspond. More research is needed linking dog owner report measures to observational assessment to determine divergence and create conceptual frameworks that cut across method.

There are studies which stress that the presence of children may affect the reactions of the owners to their dog (Albert and Bulcroft 1987, 1988; Melson 1988; Mallon 1993). It is important also to consider a more or less equal division of men and women, as well as variables such as the type of household, the number of children, and family composition.

Inclusion of those cognitive aspects that may affect the relationships between perceptions, emotions, and behavioral reactions, and possible causal relationships can shed new light on the mechanism of the owner's reactions as demonstrated with children, by Korzilius (1996) and Korzilius et al., (2001). The behavior model described in the present study attempts to explain the behavior of approximately average owners in a western society. These models should be confirmed by the study of additional problematic situations and other groups of owners. Many animals are afflicted by specific behavioral problems, but the labels placed on those animals may not be consistent across populations, so that demographic data may not, in fact, reflect the underlying frequency or occurrence of the problem. If this is true, comparisons of efficacy of treatment across populations may be questionable. The impact of cultural patterns on the behavioral problems of pets should be further studied. Such studies can detect underlying sources of variation that suggest causal mechanisms for disorders that may not have been previously appreciated, but such comparisons are invalid if the same rules were not used to formulate the diagnoses (Overall, 2001 and Overall et al., 2001).

Finally, in a simple etiological model of pet behavior problems Askew (1996, p. 44) described two dimensions of factors which can affect the animal's behavior in certain situations without making any assumptions about what precisely is going on inside the animal's nervous system. He described management related, environmental influences (learning mediated effects) such as inadequate present environment, lack of required training, unintentional owner 'training' and other conditions and reinforcement effects and 'organic' preprogramming physiological and system interactional parameters such as genetic factors, hormonal factors,



pathophysiological factors, drugs and interactions with other behavioral systems. The present study only dealt with management and environmental related issues. The fact that animals differ greatly in their reactions to identical situations can imply that the basic parameters or the operational characteristics of the underlying physiological mechanisms and learning mechanisms which generate their behavior differ in some way. For instance, while some dogs may attack other dogs, chase bicycles, or react fearfully to thunderstorms, others never do. This means that the evaluation of behavior problems and the choice of behavior modification strategies is not restricted to the behavior management, but also has to consider pharmacological intervention that may prove to be necessary or at least to facilitate the treatment of problem dog behavior (Overall, 2001 and Overall et al., 2001). Differences in observed behavior could be affected cultural or environmental effects on the manifestation of frequencies, constellations of signs

### **7.3.3 Factors for consideration**

In order to promote an adequate understanding of the dog's behavior and consequently in an attempt to develop appropriate behavior modification techniques for dog misbehavior in perceived problematic situations we have to take account of several issues:

1. Greater understanding is needed of the way in which humans perceive animals and of what factors influence this understanding.
2. We need to know more about the impact humans have on animals in situations where they interact considering also households marked by violence and abuse.
3. We need to understand more about human perception of dogs and about human attitudes to dogs in relation to various interaction settings.
4. The evaluation of the behavior system has to consider the problematic situation with the dog from the standpoint of the dog rather than the owner.
5. We need to understand more about disorders in dogs on the neurobehavioral level.

Consequently, we would like to recommend: More developmental and longitudinal studies of dogs are needed to look at sensitive periods, to assess the quality and importance of interactions and to identify the signals which we send to dogs and the signs dogs send to us.

1. More cooperation is necessary between psychologists, professionals in applied ethology, and veterinary surgeons in order to develop methods for scoring and

## **Discussion**

- assessing the interactions between humans and dogs, and the effects of poor relationships.
2. As early intervention is critical in the prevention and reduction of behavior problems, it is important to recognize animal abuse as a significant problem and a human public-health issue that should be included as a curriculum topic in training.
  3. Effective humane education is important at all levels, particularly with animal husbandry. Owners are frequently ill informed or ill advised about good ownership, pitfalls, and hazards of dog ownership. Adequate knowledge must propagate good dog ownership to owners and future owners and enhance the welfare of the dogs.

## References

- Albert, A., and Bulcroft, K. 1987. Pets and their urban life. *Anthrozoös*. 1(1). 9-23.
- Albert, A., and Bulcroft, K. 1988. Pets, family and the life course. *Journal of Marriage and the Family*. 50(2). 543-552.
- Ascione F., and Lockwood R. 1999. *Child Abuse, Domestic Violence, and Animal Abuse: Linking the Circles of Compassion for Prevention and Intervention*. Purdue University Press.
- Askew, H.R. 1996. *Treatment of Behaviour Problems in Dogs and Cats. A Guide for the Small Animal Veterinarian*. Oxford: Blackwell Scientific Publications.
- Astin, S., Redston, P., and Campbell, A. 2003. Sex differences in social representations of aggression: men justify, women excuse? *Aggressive Behavior*. 29. 128-133.
- Beata, C.A. 2001. Diagnosis and treatment of aggression in dogs and cats. In Houpt, K.A. (ed). *Recent Advances in Companion Animal Behavior Problems*. Ithaca, New York: International Veterinary Information Service. Available at: [www.ivis.org/advances/Behavior\\_Houpt/beata](http://www.ivis.org/advances/Behavior_Houpt/beata).
- Carlisle-Frank, P., Frank, J.M., and Nielsen, L. 2004. Selective battering of the family pet. *Anthrozoös*. 17 (1). 26-42.
- Cramer, K.M., and Neyedly, K.A. 1998. Sex differences in loneliness: the role of masculinity and femininity. *Sex Roles*. 38(7/8). 645-653.
- Deković, M., and Gerris, J. R. M. 1992. Parental reasoning complexity, social class and child rearing behaviors. *Journal of Marriage and the Family*. 54. 675-685.
- Delta Society Working Group. 1995. *Learning in Dogs: The Principles of Canine Behavior and Learning Implications for Learning*. Renton: Delta Society Working Group.
- Driscoll, J.W. 1992. Attitudes toward animal research. *Anthrozoös*. 5. 32-39.
- Elder, G., Wolch, J., and Emel, J. 1998. Race, Place, and the Bounds of Humanity. *Society and Animals*. 6(2). [www.psyeta.org/sa/sa10.6/elder](http://www.psyeta.org/sa/sa10.6/elder).
- Fogle, B. 1990. *The Dog's Mind*. London: Pelham Books.
- Gardner, F.E.M., Sonuga-Barke, E.J.S. and Sayal, K. 1999. Parents anticipating misbehavior: An observational study of strategies parents use to prevent conflict with behaviour problem children. *Journal of Child Psychology and Psychiatry*. 40(8). 1185-1196.
- Hart B.L., and Hart, L.A. 1985. *Canine and Feline Behavioral Therapy*. Philadelphia: Lea and Febiger.
- Hart, B.L., and Hart, L.A. 1997. Selecting, raising, and caring for dogs to avoid problem aggression. *Journal of the American Veterinary Medical Association*. 210(8). 1129-1134.
- Herzog, H.A., Betchart, N.S., and Pittman, R.B. 1991. Gender, sex role orientation, and attitudes toward animals. *Anthrozoös*. 4. 184-191.
- Herzog, H.A., and Galvin, S. 1997. Common sense and the mental lives of animals: An empirical approach. In Mitchell, R.W., Thompson, N.S. and Miles, H. L. (eds). *Anthropomorphism, Anecdotes, and Animals*. State University of New York Press. 237-253.
- Hills, A.M. 1993. The motivational bases of attitudes towards animals. *Society and Animals*. 1(2). 111-128.
- Jagoe A., and Serpell J. 1996. Owner characteristics and interactions and the prevalence of canine behaviour. *Applied Animal Behaviour Science*. 47. 31-42.
- Kobelt, A.J., Hemsworth, P.H., Barnett J.L., and Coleman G.J. 2003. A survey of dog ownership in suburban Australia – conditions and behaviour problems. *Applied Animal Behaviour Science*. 82(2). 137-148.

## Discussion

- Korzilius, H.P.L.M. 1996. *Mental Representations of Parenting. Structures of Perceptions, Cognitions, Emotions, and Behavioral Responses in Child-rearing Situations*. Doctoral Dissertation, Nijmegen: University of Nijmegen.
- Korzilius, H. P. L. M., Gerris, J.R.M., and Felling, A.J.A. 2001. Exploration of mental scripts of perceptions, cognitions, and emotions, explaining parenting behaviors. In Gerris, J.R.M. (ed). *Dynamics of Parenting*. Leuven, Apeldoorn: Garant. 391-427.
- Kuczynski, L. 1984. Socialization goals and mother-child interaction: strategies for long term and short term compliance. *Developmental Psychology*. 20. 1061-1073.
- Luescher, A.U. 2000. Compulsive behavior in companion animals. In Houpt, K.A. (ed). *Recent Advances in Companion Animal Behavior Problems*. Ithaca, New York: International Veterinary Information Service. Available at: [www.ivis.org/advances/Behavior/Houpt/beata](http://www.ivis.org/advances/Behavior/Houpt/beata).
- Luescher, A.U. 2003. Diagnosis and management of compulsive disorders in dogs and cats. *The Veterinary Clinics. Small animal practice*. 33. 253-264.
- McBride, A. 1995. The human-dog relationship. In Robinson, I. (ed). *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*. Oxford: Pergamon. 99-112.
- Mallon, G.P. 1993. The study of the interactions between men, women, and dogs at the ASPCA in New York City. *Anthrozoös*. 6(1). 43-47.
- Melson, G.F. 1988. Availability of and involvement with pets and children. Determinants and correlates. *Anthrozoös*. 2. 45-52.
- O'Farrell, V. 1992. *Problem Dog – Behavior and Misbehavior*. London: Methuen.
- O'Farrell, V. 1994. *Dog's Best Friend: How Not to be a Problem Owner*. London: Methuen.
- Overall, K. L. 1997. *Clinical Behavioral Medicine for Small Animals*. Mosby.
- Overall, K.L. 2001. Evaluation and management of behavioral conditions. In Braund, K.G. (ed). *Clinical Neurology in Small Animals - Localization, Diagnosis, and Treatment*. Ithaca, New York: International Veterinary Information Service. Available at: [www.ivis.org/advances/braund/overall](http://www.ivis.org/advances/braund/overall).
- Overall, K.L., Dunham, A.E., and Frank, D. 2001. Frequency of nonspecific clinical signs in dogs with separation anxiety, thunderstorm phobia, and noise phobia, alone or in combination. *Journal of the American Veterinary Medical Association*. 219. 467-473.
- Rajecki, D.W., Rasmussen, J.L., and Craft, H.D. 1993. Labels and the treatment of animals: Archival and experimental cases. *Society and Animals*. 1. 45-60.
- Rasmussen, J.L., and Rajecki, D.W. 1995. Differences in similarities in human's perceptions of the thinking and feeling of a dog and a boy. *Society and Animals*. 3. 117-137
- Serpell, J. 1992. Effects of pet-acquisition on human health: The search for a mechanism. *Paper presented at the six International Conference on Human Animal Interactions, Montreal, Canada*.
- Serpell, J.A. 2002. Anthropomorphism and anthropomorphic selection beyond the 'Cute Response'. *Society and Animals*. 10(4). Available at: [www.psyeta.org/sa/sa10-4](http://www.psyeta.org/sa/sa10-4).
- Siebenheller, F.A. 1988. Problematische opvoedingssituaties: subjectieve percepties, affectieve belevingen en gedragingen van ouders (Problematic child-rearing situations: subjective perceptions, affective reactions and behaviors of parents). In Gerris, J. R. M. and van Acker, J. (ed). *Gezinsrelaties Onderzocht*. Amsterdam/Lisse: Swets and Zeitlinger. 77-98.
- Siebenheller, F.A. 1990. *Problematische Opvoedingssituaties: percepties, Emoties en Disciplineringsreacties van Ouders. Een Interactionistische Exploratie van Antecedenten van Reacties van Ouders in Alledaagse Problematische Opvoedingssituaties (Problematic Child-rearing Situations: Perceptions, Emotional Reactions and Discipline Reactions of Parents. An Interactionistic Exploration of*

- Antecedents of Reactions of Parents in Every-day Child-rearing Situations*). Doctoral dissertation, Nijmegen: University of Nijmegen.
- Voith, V.L., Wright, J.C., and Daneman, P.J. 1992. Is there a relationship between canine behavior problems and spoiling activities, anthropomorphism, and obedience training? *Applied Animal Behaviour Science*. 34. 263–272.



## **Chapter 8. Dutch Summary**

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## Dutch Summary

Dit onderzoek beoogt een bijdrage te leveren aan de kennis van de relatie tussen de hond en zijn eigenaar op het terrein van disciplineren van de hond in problematische situaties. De studie heeft tot doel:

- De rol te verhelderen van percepties, emoties en attitudes van de hondeneigenaar in de manier waarop de eigenaar zich gedraagt in vaak voorkomende moeilijke opvoedingsituaties.
- Overeenkomsten te zoeken tussen de opvoeding van honden en de opvoeding van kinderen in moeilijke vaak voorkomende situaties.

Het gaat concreet om het beantwoorden van vragen zoals: hoe kijken hondeneigenaren aan tegen (moeilijke) opvoedingssituaties? Welke emoties ervaart de eigenaar? Op welke manieren wordt er op het gedrag van de hond gereageerd? Wat is de invloed van de attitudes en kenmerken van de eigenaar op de opvoeding van de hond in vaak voorkomende moeilijke situaties. Bovendien schetst dit onderzoek verder een model dat de diverse relaties tussen deze variabelen beschrijft. Ten slotte wordt in deze studie onderzocht welke overeenkomsten en verschillen bestaan tussen de reacties van hondeneigenaren respectievelijk ouders in vaak voorkomende problematische situaties met betrekking tot de hond respectievelijk het kind.

Het gedrag van de hond wordt vaak beschreven in termen van specifiek psychologische aspecten en attributen die ook gehanteerd worden bij de beschrijving van het gedrag van kinderen. De hond wordt benaderd als ware hij een mens; hij heeft in de beleving van de eigenaar gewenste en ongewenste menselijke eigenschappen en gedachten, is in staat het rationele van straf te begrijpen, heeft empathie, is in staat om zich emotioneel te laten gelden en is zich bewust van de rol die hij heeft in de relatie tot de eigenaar of het gezin waarin hij opgroeit.

Hoewel de hond een breed scala van gedragingen vertoont die gewoon en natuurlijk voor een hond zijn, bestaan er tamelijk grote problemen wat betreft tot de classificatie van gedragsproblemen bij honden. Dat komt door de opvatting dat gedragsproblemen bij een hond een relatief begrip zijn, dat wil zeggen, de problemen worden gekarakteriseerd en begrepen in relatie tot de humane context waarin ze plaatsvinden. Sommige van deze gedragsproblemen zijn enkel gerelateerd aan de perceptie van de hondeneigenaar die bepaalt wat een gedragsprobleem is. Hoewel gewone hondengedragingen zoals blaffen en markeren natuurlijk hondengedrag kunnen zijn, beschouwt de hondeneigenaar deze uitingen vaak als ongewenst en ongepast. Andere gedragsproblemen zijn authentieke gedragsstoornissen die veroorzaakt worden door een genetische aanleg en/of eerdere ervaringen van de hond. Deze



gedragsstoornissen kunnen aangeleerd zijn of een afspiegeling vormen van een pathologische of fysiologische gesteldheid van de hond.

Mensen zijn vaak zeer gehecht en emotioneel gebonden aan hun hond. De hond wordt daarom ook vaak beschouwd als een kind of een gezinslid. Daarom vermoeden wij dat de ouderlijke antecedenten voor disciplineringsgedrag (percepties, emoties) vergelijkbaar zijn met de antecedenten van het disciplineringsgedrag van de hondeneigenaar. In een problematische situatie met het kind probeert de ouder het gedrag van het kind te controleren en te veranderen door het gebruik van diverse communicatiemiddelen die zijn afkeur uitdrukken, zoals uitleg, suggesties, waarschuwingen, eisen stellen of straffen.

De gangbare aanpak van de disciplinering van de hond houdt meestal twee mogelijkheden in: straffen van ongewenst gedrag en belonen van goed gedrag. Het vertalen van deze strategieën in menselijk disciplineringsstrategieën kan uitgedrukt worden enerzijds in termen van de intensiteit van de controle, zoals machtsuitoefening, straffen en verbaal straffen en anderzijds in termen van de kwaliteit van de disciplineringsstrategieën zoals liefde, troosten, het onthouden van aandacht of negeren van overtredingen.

Het voorliggende empirisch onderzoek richt zich voornamelijk op het beschrijven van de bij de hondeneigenaar aanwezige representaties van opvoedingssituaties en op de exploratie van de relaties tussen de representaties van de verschillende typen van opvoeding.

Bij hondeneigenaren maken wij een onderscheid tussen percepties, emoties en gedragsreacties. De beschrijving is gericht op de inhoud van deze representaties en op de wijze waarop de samenstellende delen manifest worden in opvoedingssituaties. De *situatie* wordt opgevat als een alledaagse problematische opvoedingssituatie en de *perceptie* van de situatie verwijst naar de waarneming (de betekenis die de eigenaar van hond aan de situatie toekent) van de totale situatie. De perceptie van de hondeneigenaar is in deze studie onderzocht door aan eigenaren 39 verschillende situaties in de opvoeding van de hond voor te leggen en deze te laten beoordelen op hun mate van overeenkomst. Deze situaties zijn representatief voor veel voorkomende situaties en worden door de eigenaren als problematisch ervaren. De eigenaren bleken de overeenkomst van de situaties gedifferentieerd waar te nemen. Op basis van multi-dimensionele schalingstechnieken van situatie-perceptie gegevens konden wij de situaties ordenen in een drie-dimensionale configuraties in de ruimte. De afstand van de situaties in de configuratie was een directe afspiegeling van de mate waarin

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de hondeneigenaren de situaties als verschillend waarnamen. Een voorbeeld van zo'n overeenkomst is de situatie waarin de hond bang is voor andere honden en de situatie waarin hij bang is voor lawaai. Een ander voorbeeld: in de ogen van de eigenaar is de situatie waarin de hond vecht met andere honden weinig vergelijkbaar met de situatie waarin de hond dingen in huis vernielt. De hiërarchische clusteranalyse (een methode om de organisatie van situaties door de hondeneigenaren te laten reconstrueren) resulteerde in acht clusters: angstig, agressief/dominant, 'seksueel', emotioneel, verveelt zich/eenzaam, eetgewoontes, onhandelbaar en ongehoorzaam. De resultaten van de multidimensionele schaling en de hiërarchische clusters analyse ondersteunen elkaar.

Om de representaties van eigenaren te reduceren en meer inzicht te krijgen in percepties, emoties en gedragsreacties, beschrijft dit onderzoek ook de onderliggende structuren van de representaties van de hondeneigenaren. De percepties van de hondeneigenaren van de opvoedingssituaties worden gevormd door drie dimensies. Deze drie dimensies geven aan waar de eigenaren in veel voorkomende moeilijke situaties met de hond op letten, aspecten waarin ze het hondengedrag mentaal categoriseren. Eigenaren letten er ten eerste op of de hond de regels overtreedt over dan wel of hij angstig is. Ten tweede bekijken de eigenaren of het gedrag van de hond hinderlijk is dan wel of hij zich agressief gedraagt. Ten derde worden de situaties beoordeeld op het feit of de hond moeilijk is in te nemen of dat hij reageert op een manier die de eigenaar als rij-gedrag beschouwt.

De dimensies zijn: 1. angstig/onderdanig versus overtreder; 2. agressief gedrag versus hinderlijk gedrag; 3. 'seksueel'/paren gedrag versus opgewonden/ongecontroleerd gedrag.

De emoties van de eigenaren vertonen een sterke differentiatie. Sommige situaties roepen minder intensieve emoties op (bijvoorbeeld, 'de hond mijdt confrontatie met andere honden') en sommige situaties roepen juist hevige emoties op (bijvoorbeeld, 'de hond vecht buiten met een ander dier'). Er werden drie factoren gevonden die betrekking hebben op de emoties van de hondeneigenaren. Het zijn: 1. medelijden en angst; 2. boosheid en irritatie; 3. schaamte en berouw.

Ook de gedragsreacties in opvoedingssituaties vertonen een gedifferentieerd beeld. Soms reageren de hondeneigenaren op dezelfde wijze terwijl in andere gevallen dit op veel verschillende manieren gebeurt. Bij ongehoorzaam gedrag bijvoorbeeld wordt de hond vaak

gestraft. Het merendeel van de hondeneigenaren eist gehoorzaamheid. In situaties waarin de hond angstig is, proberen de meeste eigenaren de hond te troosten en te helpen.

Er zijn twee onderliggende gedragsfactoren gevonden. Deze factoren geven de strategieën aan waarmee eigenaren het voor hen problematische gedrag aanpakken, namelijk machtsuitoefening en aansporend of troostend gedrag. Onder machtsuitoefening worden gedragingen verstaan als de hond streng toespreken en lichamelijke straffen. In situaties waarin de hond bijvoorbeeld bang is, proberen de eigenaren de hond te troosten en te helpen. De conclusie is dat eigenaren gedifferentieerde aspecten van opvoedingssituaties waarnemen en dat dat resulteert in gedifferentieerde emoties en gedragsreacties.

Naast de gegevens over de percepties, emoties en gedrag worden achtergrondgegevens behandeld, zoals het geslacht van de eigenaar en enkele attitudes van de eigenaren van honden ten aanzien van hondenbezit. Wat attitudes betreft, werden er vier onderliggende betekenisvolle factoren gevonden, namelijk, de voldoening van het hondenbezit (eigendom), de taakbelasting veroorzaakt door hondenbezit, de betrokkenheid en zorg voor de hond en discipline en controle. Tevens werd onderzocht of de sociale ondersteuning die de hond aan de eigenaar kan verlenen en de gehechtheid van de eigenaar aan de hond invloed hebben op de gedragsreacties van de eigenaar in problematische alledaagse situaties.

De volgende fase in deze studie was de exploratie van de relaties tussen de diverse representaties van opvoedingssituaties. Uit de literatuur aangaande de interacties tussen kinderen en ouders blijkt dat de meest aannemelijke volgorde van ouderlijke representaties is: perceptie, cognitie, emotie, gedragsreactie. Dat betekent dat percepties mogelijk de emoties en de gedragsreacties beïnvloeden en dat op hun beurt emoties zowel attitudes als gedragsreacties kunnen bepalen.

Hoewel wij de resultaten van dit onderdeel van het onderzoek voorzichtig moeten benaderen, kunnen wij toch het volgende concluderen: het model geeft een beeld van hetgeen zich bij de hondeneigenaar afspeelt in de interactie met de hond in een vaak voorkomende problematische alledaagse situaties. Het bevat een beperkt aantal patronen van verbanden. Bijvoorbeeld een patroon waarin de eigenaar waarneemt dat de hond in overtreding is; de eigenaar wordt boos en geïrriteerd en reageert middels machtsuitoefening. Een ander voorbeeld van een patroon: de eigenaar ziet dat de hond op straat tijdens een wandeling een vreemde persoon lastig valt; dit gedrag roept bij hem vervolgens gevoelens van boosheid en

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irritatie op want de hond heeft hem in een lastige situatie gebracht. De eigenaar reageert door gehoorzaamheid te eisen, de hond te straffen of iets leuk voor de hond te verbieden. Een ander karakteristiek patroon wordt gevonden in situaties waarin hondeneigenaren hun hond als angstig en onderdanig waarnemen, bijvoorbeeld omdat de hond bang blijkt voor lawaai. In zo'n geval ervaart de eigenaar soms gevoelens van ongerustheid, angst, bezorgdheid en reageert hij door de hond te troosten en hem op zijn gemak te stellen. Deze patronen kunnen worden beschouwd als doorgangsroutes in de opvoeding van de hond. De dimensies: de ongehoorzame hond versus de angstige hond, de emoties boosheid en irritatie, medelijden en angst en de attitude satisfactie blijken in het model een belangrijke positie te hebben.

In deze studie werd voorts onderzocht of er groepsverschillen bestaan met betrekking tot dit model. Nagegaan werd of de verbanden die werden gevonden bij de totale onderzoeksgroep (in totaal 880 eigenaren in opvoedingssituaties), op gelijke wijze aanwezig zijn bij mannelijke en vrouwelijke hondeneigenaren. Er blijken overeenkomsten te bestaan tussen mannelijke en vrouwelijke eigenaren. Een voorbeeld van overeenkomst is dat mannen en vrouwen op min of meer gelijke manier een angstige hond of ongehoorzame hond karakteriseren. Verder, het blijkt dat mannen en vrouwen niet van elkaar verschillen in de structuren van de representaties Percepties → Emoties → Reacties.

Er bestaan ook verschillen tussen mannen en vrouwen hondeneigenaren. Mannen verschillen bijvoorbeeld in de nadruk die wordt gelegd op belangrijke relaties in het exploratief model, in de intensiteit van de emotionele reacties en in de diversiteit in attitudes die de reacties beïnvloeden. Mannelijke eigenaren tonen sterkere reacties dan vrouwelijke eigenaren; bijvoorbeeld de intensiteit van boosheid en irritaties is bij mannen hoger dan bij vrouwen in situaties van ongehoorzaamheid.

Tenslotte is in dit onderzoek een vergelijking gemaakt tussen de bevindingen van de disciplineringsstrategieën van hondeneigenaren enerzijds en de disciplineringsstrategieën van ouders in veel voorkomende problematische situaties met hun kind anderzijds. Studies van ouder-kind interacties in problematische situaties presenteren een vergelijkbaar model van ouderlijke reacties in problematische situaties met het kind.

De onderliggende structuren van de ouderlijke representaties onderscheiden ouderlijke percepties, cognities, emoties en gedragsreacties. Ongehoorzaamheid en slachtoffer zijn zijn de belangrijkste ouderlijke percepties. Bezorgdheid, boosheid en irritatie zijn de meest

voorkomende emotionele reacties. De meest frequente ouderlijke reacties zijn aansporend gedrag, machtsuitoefening, laissez-faire of niets doen in de situatie en inductieve reacties waarmee het kind op mogelijke gevolgen van het gedrag wordt gewezen. Het blijkt dat de reacties van de ouders in situaties die als moeilijk worden ervaren min of meer in overeenstemming zijn met de reacties van hondeneigenaren in moeilijke situaties met de hond. Verder blijkt dat zowel bij kinderen als bij honden satisfactie en warmte een belangrijke predictor zijn voor de reactie ouder/eigenaar. Deze attitudes sluiten echter niet uit dat de ouder en de hondeneigenaar op gehoorzaamheid staan en vervolgens in situaties van misdraging discipline en machtsuitoefening toepassen.

De reacties van de hondeneigenaar en van de ouder kunnen beide weergegeven worden in een vergelijkbaar model van Perceptie → Emotie → Reactie.

De vele overeenkomsten tussen het disciplineren van kinderen en honden impliceren dat de hondeneigenaar soortgelijke verwachtingen van de hond heeft als de ouder van het kind. Hij verwacht dat de hond zijn gedrag als verkeerd 'begrijpt' wanneer hij straf krijgt. Deze houding kan echter leiden tot misverstanden en een averechts effect hebben op de hond. Adequate informatie over de opvoeding van de hond en hoe men met de hond moet communiceren zijn van wezenlijk belang om misverstanden en ineffectieve trainingsmethoden te voorkomen. Dit zal niet alleen het algeheel begrip van de hond-eigenaarrelatie verbeteren, maar kan ook de hondeneigenaar helpen de correcte disciplineringsstrategieën aan te wenden.

## **Dankwoord**

## Dankwoord

Dit onderzoek is tot stand gekomen met de medewerking en de steun van velen.

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over kinderen en ouders in moeilijke situaties en mijn onderzoek ging over honden en hun eigenaren in moeilijke situaties. Het verschil is niet altijd groot. Jouw onderzoek was voor mij mijn 'bijbel'. Bedank voor je inzet, je ondersteuning en de energie die je in mij hebt gestoken.

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Als iemand mij zou vragen: "zou je dit allemaal opnieuw willen doen?" zal mijn antwoord zijn JA.



## **Curriculum Vitae**

Judith Ben-Michael werd geboren op 1 februari 1953 te Bacau in Roemenië. In 1964 immigreerde zij met haar ouders, broer en oma naar Israël. In 1971 behaalde zij haar atheneum diploma en vervulde gedurende twee jaar haar dienstplicht in het Israelisch leger. In 1973 begon zij aan haar studie biologie aan de Bar-Ilan University te Tel-Aviv en behaalde daar de graad Bachelor of Science (BSc.) in 1976.

Na een paar jaar te hebben gewerkt op de Landbouw Universiteit en het Weitzman Instituut in Rechovot (Israël) gaf zij twee jaar biologieles op een middelbare school. In 1980 vertrok zij naar Nederland met man en kind om verder te studeren. In 1989 behaalde zij haar doctoraal in biologie aan de Radboud Universiteit Nijmegen (voorheen de Katholieke Universiteit Nijmegen). Deze studiereis werd een tweede immigratie. In 1990 is zij begonnen met haar huidige onderzoek bij het Centrum voor Promotie (voorheen de Promotiewerkplaats). In deze periode was zij ook betrokken bij andere projecten, o.a. bij een onderzoek naar inhoudelijke en organisatorische aspecten van de stichting Hulp Hond Nederland; bij een werkgroep ter ondersteuning van diverse afdelingen van de Dierenbescherming betreffende diverse landelijke opleidingstrajecten en bij het opzetten en uitvoeren van een biologieproject voor getalenteerde allochtone leerlingen en leerlingen met sociale achterstand bij het Centrum voor Begaafdheidsonderzoek aan de Radboud Universiteit Nijmegen.

Naast deze werkzaamheden zit zij al meer dan 15 jaar in allerlei besturen bij diverse vrouwen-organisaties en sinds een paar jaar zit zij in het Nijmeegse bestuur van de PvdA, alsmede in verschillende werkgroepen daarvan.